SHIKSHAN PRASARAK MANDAL

NABIRA MAHAVIDYALAYA, KATOL (MS)

Affiliated with Rashtrasanta Tukdoji Maharaj

Nagpur University, Nagpur (MS)

Website:

https://www.nabiramahavidyalayakatol.com/

2.5.1

Mechanism of internal assessment is transparent and robust in term of frequency and mode

NABIRA MAHAVIDYALAYA, KATOL

K.K. Chandak Marg, Dhantoli, Katol
Distt. Nagpur (M.S.) Pin - 441 302
Graduation & Post Graduation in
Arts, Commerce, Science & Management
Phone : 07112 - 222004 Mobile : 8857026884
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NAAC'S B++ Accredited College

Ref.No. :

Date : 09/11/2024

DECLARATION

This is to declare that the information, reports, true copies and numerical data etc. furnished in this file as supporting documents are verified by IQAC and found correct.

Hence this is certificate.

Dr. Punit Raut
Co-Ordinator
IQAC, NMV Katol

Dr. S. K. Navin
Principal
Nabira Mahavidyalaya
Katol, Dist. Nagpur.

More Sir

B.Sc. Sem. IV

Subject - Chemistry

Paper - II (Physical chemistry)

2023-24

Assignment

Dt. 27.03.2024

S.N.	Name of student	signature	Signature Submission
(1)	Tina S. Yelekar	Yelekar.	yelekar 12/04/24
(2)	Khushali O. Thombre	Othombre.	Rawatkar 12/04/24
(3)	Rajshree R. Rawatkar	Rawatkar	Tamade 12/04/24
(4)	Lakita U. Malode	Umalode	Sameers, Akram 12-04-24
(5)	Sameer S. Akram	Sameer S. Akram	Shivprasad 12/04/2024
(6)	Shioprasad P. Suryawanshi	Suryawanshi	Ajsheikh 12-04-24
(7)	Ajon S. Sheikh	Asheikh.	Barcui 15/4/24
(8)	Vikki V. Doble	Vikki	Athinpure 12-04-24
(9)	Vikas D. Barcui	VDBarcui	Mdongare 12/04/24
(10)	Aparna G. Chinchmalatpure	AGchinchpure	RRaut 12/04/24
(11)	Samiksha C. Dongare	SCdongare	Vaishnavi 12/04/24
(12)	Kalyani B. Babhulkar	RRaut	J.N. mehar 12/4/24
(13)	Vaishnavi L. Nibude	Vaishnavi	Akambale 12/4/24
(14)	Janhavi N. Meher	J.N. mehar	ARdhongade 12/4/24
(15)	Ashwini Y. Kambale	Akambale.	OA Giradkar 12-4-24
(16)	Anjali R. Dhongade	ARdhongade	Dsitharwad 12/04/24
(17)	Disha A. Giradkar	OA Giradkar	PDfule 15/04/24
(18)	Dharavi S. Somkuwar	Dsitharwad.	Rachik P Malvi 12/04/24
(19)	Rutali R. Gosle	Rgosle	Dbabkar 12/04/2024
(20)	Manisha M. Aage	M.M. Aage	Sawai 12/04/24
(21)	Pooja A. Pambhale	Apambhale	H.R. Kale
(22)	Prakiksha D. Fule	PDfule	3.M. Barmase 3104124
(23)	Chhakuli M. Wadule	Cmwadule	K. Raut 3104124
(24)	Ruchika P. Malvi	Pmalvi	Dkale 3104124
(25)	Divya S. Chapekar	Dschapekar	
(26)	Sharda O. Chandele	Schandele	
(27)	Darshika W. Sawai	Dsawai	
(28)	Purva S. Kharpkar	Pskhal	
(29)	Hemlata R. Kale	HRkale	
(30)	Saroj M. Barmase	Sbarmase 3104124	
(31)	Khushi H. Raut.	K.Raut 3104124	
2	Prachi R Tekade	Dkale 3104124	

Head, Chemistry Deptt
Mahavidyalaya, Katol



NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT

SESSION -2023-24 (WINTER)

CLASS- B.Sc. SEM-V (Chem-I)

QUE-1 : Explain Nucleophilic substitution reaction in Nitrobenzene ?

QUE-2: Why Nitroalkanes are acidic in nature ? how nitroalkanes undergo reduction?

QUE-3: Explain the basicity of amines?

QUE-4: How will you separate primary , secondary and tertiary amines by using Hinsberg method?

QUE-5: How will you prepare

1. Tertiary butyl alcohol from acid chloride
2. Isopropyl alcohol from methyl formate
3. Amines from chloramine
4. Acetic acid from methyl magnesium bromide.

QUE-6: How will you prepare alkyl lithium? Write any three chemical reactions of alkyl lithium?

QUE-7: Explain Molecular Orbital Picture of Furan ?

QUE- 8: Explain Electrophilic Aromatic Substitution reaction in Pyridine ?

QUE- 9: How will you prepare Indole by Fishcher -Indole Synthesis ?

QUE-10: Explain Skraup Quinoline Synthesis

Professor in-charge

Mr. Nilesh G. Jadhao
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol



NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT SUBMISSION

SESSION -2023-24 (Winter) **CLASS- B.Sc. SEM-V (Chem-I)**

Sr.No.	Name of Student	Signature
1.	Sakshi Prabhakar Dhote	S P Dhote
2.	Bhagyashri Dnyaneshwar Raut	B Raut.
3.	Vaishnavi Kisnaji Chaudhari	V Chaudhari
4.	Vaishnavi Sudhakar Waike	V Waike
5.	Vedinee Sanjay Tathode	V Tathode
6.	Sahili Anand Lichtbidge	~~S Lichtbidge~~
7.	Aman V. Jinghare	A V Jinghare
8.	Khushi B. Goswami	K B Goswami
9.	Ranjali O. Relwatkar	R Relwatkar
10.	Sumit K. Thakre	S K Thakre.
11.	Ruchika S. Dhawale	R Dhawale
12.	Akhil S. Watane	A S Watane
13.	Shraddha Co. Gore	S Gore
14.	Isha L. Gharad	I L Gharad.
15.	Riya D. Bansare	R D Bansare.
16.	Janhvi R. Tatte	J R Tatte.
17	Priyanka M. Bondre	P M. Bondre.
18	Deepali H. Thombre	D. H. Thombre
19	Lakshi P. Kale	L P Kale
20	Aadesh D. Dhengre	A D Dhengre
21	Isha B. Kasare	I. B. Kasare.
22	Dipanjali M. Alone	D M Alone
23	Harshal A. Deshmukh	H A Deshmukh
24)	Jay S. Potpile.	J S Potpile
25)	Himanshu H Naik	H H Naik
26)	Janvi S. Kakde.	J S Kakde
27)	Anisha A. Dambhare	A A Dambhare
28)	Bhagyashri A. Wangal.	B. A. Wangal.
29)	Mahima G. Chaudhari	M G Chaudhari



NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT SUBMISSION

SESSION -2023-24 (Winter) **CLASS- B.Sc. SEM-V (Chem-I)**

Sr.No.	Name of Student	Signature
30	Bhagyashri S. choudhari	Bhwdhari
31	Rutuja G. Wankhede	R G Wankhede
32	Hina. M. Ninave	Ninave
33	Ashwini Rakshit	Akshit
34	Paksha S Kolhe	Pkolhe
35	Aditya. D. Amprawar	Aditya D
36	Mohd D. Parkhi.	Parkhi
37	[illegible]	
38	[illegible]	
39	[illegible]	
40	[illegible]	
41	[illegible]	

Mr. Nilesh G. Jadhao
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Head, Chemistry
Nabira Mahavidyalaya, Katol



NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT SUBMISSION

Jadhav Sir.

SESSION -2023-24 (Summer) **CLASS- B.Sc. SEM-VI (Chem-II)**

Sr.No.	Name of Student	Signature
1	Khushi B. Goswami	K.B.Goswami
2	Ranjali D. Rewatkar	Rewatkar
3.	Bhagyashri D. Raut	BRaut.
4.	Isha B. Kasare	I. B. kasare.
5.	Sakshi Dhote	S.P.Dhote
6.	Janhvi Tatte	
7.	Isha Gharad	
8)	~~Saksh~~	
9)	Janvi · S. Kakde	Kakde
10)	Achal S. Watane	Watane
11)	Ruchika S. Dhawale	Dhawale
12)	Bhagyashri S. choudhari	Bhushan Choudhari
13)	Mahima G. choudhari	
14)	Deepali H. Thombre	D.H. Thombre
15)	Bhagyashri A. Wangal	A.A.Wangal
16)	Tushal · D. Fule	
17)	Harshal A. Deshmukh	Deshmukh
18)	Jay. S. Pokik	
19)	Vishal. S. Tonge	
20)	Amisha A. Dambhare.	Dambhare.
21)	Priyanka M. Bondre	P.M.Bondre
22)	Sejal K. Wanane	Sejal
23)	Riya D. Bangre	
24)	Dipanjali M. Alone	D.M.Alone
25)	Vaishnavi K. Choudhari	K.Choudhari
26)	Mona Damodhar Parkhi.	Parkhi.
27)	Aditya. D. Ampawar	Aditya. D
28)	Sumit K. Thakur	Thakur.
29)	Shital V. Rewatkar	S. Rewatkar



NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT SUBMISSION

SESSION -2023-24 (Summer) **CLASS- B.Sc. SEM-VI (Chem-II)**

Sr.No.	Name of Student	Signature
30	Ashwini Rakshit	Rakshit.
31	Sakshi S. Kale	Skale
32	Vaishnavi S. Walke	VSwalke
33	Sahili A. Gajbhiye	~~gajbhiye~~
34	Pavan V. Junghare	PVJunghare
35	Shraddha G. Gore	Gore
36	Ranga G. Wankhede	R G Wankhede

Mr. Nilesh G. Jadhao
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Shikshan Prasark Mandal's

NABIRA MAHAVIDYALAYA, KATOL



DEPARTMENT OF CHEMISTRY

B++ NAAC

Department Establishment-1970

E-mail: departmentofchemistry1971@gmail.com

Notice

All students of B.Sc. Sem-V of Chemistry Paper -I (Organic Chemistry) are hereby informed that the Unit Test on Nitrocompounds and Amines (Unit-I) will be held on 27/10/2023 at 10:30 am.

All students should remain present for the unit test.

Venue- Room No. 101.

Mr. Nilesh G. Jadhao

Prof.In-charge

Mr. Nilesh G. Jadhao
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

NABIRA MAHAVIDYALAYA KATOL

Department of Chemistry

UNIT TEST -1

Session-2023-24

Class- B.Sc-III (Sem-V) | Sub-Chemistry | Paper- I

Time -10:30 am to 11:30 am | Marks : 20 | Date: 27/10/2023

Q-I] Long answer questions –(Attempt Any 4) - 10 Marks

1. How will you prepare Nitroalkanes from I. Alkane II. Alkyl Halide III. Oxime
2. Explain Nucleophilic Substitution reaction in Nitrobenzene?
3. How Picric acid can be prepared from I. Phenol II. Salicylic acid III. Chlorobenzene. give its uses?
4. Explain the method of separation of aliphatic primary, secondary and tertiary amines from their mixtures by Hinsberg Mechanism?
5. How will you Prepare Benzene Diazonium Chloride ? How Chlorobenzene ,Phenol, Benzene, Biphenyl prepared from Benzene Diazonium Chloride?

Q-II] Short answer questions (All questions are compulsory) - 10 Marks

1. Write reduction reaction of nitrobenzene in acidic, basic, neutral medium.
2. What are nitroarenes ? How is nitrobenzene prepared from benzene and aniline?
3. What are amines ? why aliphatic amines are more basic than aromatic amines ?
4. Write a short note on Gabriel Pthalimide reaction.
5. Explain Nitration of Aniline ?

All The Best !

UNIT TEST-1

ATTENDANCE SHEET Session - 2023-2024

Class : BSc-Sem-V Sub- Chemistry Paper -I Date: 27/10/2023

Sr. No.	Name of the Student	Signature	Marks Obtained	Name of the Student	Signature
1]	Sumit K. Thalor	Sthalor	08		
2]	Pawan V. Jungbare	P.Jungbare	14		
3]	Tushal D Fule	T Fule	07		
4]	Harshal A. Deshmukh	HDeshmukh	12		
5]	Aditya D. Amparwar	Aditya	08		
6]	Anikesh P. Kumeriya	APKumeriya	08		
7]	Amisha A. Dambhare	ADambhare	10		
8]	Ruchika S. Dhawale	RDhawale	12		
9]	Bhagyashri S. Choudhari	BChoudhari	15		
10]	Priyanka M. Bondre	P.M. Bondre	14		
11]	Sejal K. WAHANE	Sejal	12		
12]	Riya D. Bangare	RDBangare	10		
13]	Janhvi R. Tathe	Janhvi	16		
14]	Isha L. Gharad	Isha	12		
15]	Shraddha G. Gore	Gore	09		
16]	Janvi S. Kakde	Janvi K	08		
17]	Naishavi K. Choudhari	NKhoudhari	08		
18]	Bhagyashri A. Wangel	A.Wangel	13		
19]	Mahima G. Choudhari	Choudhari	10		
20]	Isha B. Kasare	I.B.Kasare	12		
21]	Dipanjali M. Alone	DAlone	14		
22]	Deepali H. Thombre	D.H.Thombre	12		
23]	Hina U. Ninave	HUNinave	10		
24]	Pranjali D. Rewatkar	Rewatkar	17		
25]	Khushi B. Goswami	K B Goswami	15		
26]	Bhagyashri D. Raut	BRaut	15		

Mr. Nilesh G. Jadhao
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Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT- SHEET

Class : B.Sc. Sem -I , P-II (Physical Chemistry) **Section :** Grant **Date:** 20/12/2023

Sr. No.	Name of the Student	Assignment -II	Assignment -III	Assignment -IV	Signature
1	Gayatri Ghosmade	✓	✓	✓	Ghosmade
2	Divyani Dhanorkar	✓	✓	✓	Dkarkar
3	Neha p. channe	✓			
4	Shubhangi Chandele	✓	✓	✓	Schandele
5	Swapnil S. Kohale	✓	✓	✓	S.Kohale
6	Sanskruti D. Meshram	✓	✓	✓	S. D. Meshram
7	Bhavika C. Bagde	✓	✓	✓	BBagde
8	Bhagyashree V. Chanre	✓	✓	✓	B. V. Chanre
9	Payal A. Chandele	✓	✓	✓	Payal
10	Saloni J Manmode	✓	✓	✓	Jmanmode
11	Kamal R Chaudhari	✓	✓	✓	Kchaudhari
12	Achal A. Lokhande	✓	✓	✓	Alokhande
13	Farhat Nuzat R. Shaikh	✓	✓	✓	Fshaikh
14	Trupti N. Charde	✓	✓	✓	NCharde
15	Bharti D. Raut	✓	✓	✓	DRaut
16	Khushali S. Kathane	✓	✓	✓	SKathane
17	Devyani S. Dawake	✓	✓	✓	DSDawake
18	Gauri P. Raut	✓	✓	✓	Praut
19	Sudhanshu Y. Amale	✓	✓	✓	Yamale
20	Sanskruti S. Gajbe	✓	✓	✓	S.S.Gajbe
21	Atiesh. G. Donge	✓	✓		A. Donge
22	Srushti R. Nimbhorkar	✓	✓	✓	Srushti
23	Prachi R. Nehare	✓	✓	✓	PNehare
24	Harshada P. Jagdale	✓	✓	✓	Jagdale
25	Krunali P. Bodhale	✓	✓	✓	Pbodhale
26	Dimpal R. Gawande	✓	✓	✓	[illegible]
27	Rudra A. Bisani	✓	✓	✓	Abisani
28	Tejaswini R. Khorgade	✓	✓	✓	[illegible]
29	Chetan S. Rewatkar	✓	✓	✓	Rewatkar
30	Pallavi K. Gathe	✓	✓	✓	Kgathe
31	Vishakha M. Uke	✓	✓	✓	V.M.Uke
32	Priya G. Sirsam	✓	✓	✓	GSirsam
33	Khushi G. Dhonde	✓	✓	✓	K.Dhonde
34	Srushti R. Dhok	✓	✓	✓	SDhok

NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT- SHEET

Class : B.Sc. Sem -I , P-II (Physical Chemistry) **Section :** Grant **Date:** 22/12/2023

Sr. No.	Name of the Student	Assignment -II	Assignment -III	Assignment -IV	Signature
35	Sakshi N. Fuse	✓	✓	✓	Sakshi
36	Riddhi V. Kabbande	✓	✓	✓	RKabbande
37	Tina R. Maboriya	✓	✓	✓	RMaboriya
38	Chanda R. Rathod	✓	✓	✓	C.R.Rathod
39	Vaishnavi R Chemtam	✓	✓	✓	VRchemtam
40	Oshika H. Ghughuskar	✓	✓	✓	OHughuskar
41	Achal A. Banait	✓	✓	✓	AAbanait
42	Rutuja S. Dhakme	✓	✓	✓	RS Dhakme

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

ASSIGNMENT- SHEET

Class : B.Sc. Sem-I P-II Section : ~~Mah~~grant

Date: 04/09/2023

Sr. No.	Name of the Student	Signature	Sr. No.	Name of the Student	Signature
1	Gayatri Ghormade	Ghormade	36)	Divyani D. Sussuse	Divyani
2	Sudhanshu Amale	Amale	37)	Anjali O. Gorhakar	Gorhakar
3	Chanda Rathod	C. Rathod	38)	Priya G. Sitsam	P. Sitsam
4	Shubhangi Chandele	Schandele	39)	Sakshi S. Sitsam	Sitsam
5.	Payal A. Chandele	Pchandel	40)	Payal V. Shrirame.	Shrirame.
6)	Alpesh. S. Dongre	A Dongre.	41)	Chetan S. Rewatkar	
7)	Rudra A. Bisani	R. Bisani	42)	Sanskruti S. Gajde	S.S. Gajde
8)	Monika M. Barsul	Mbarsul	43)	Suhani G Khodankar	Khodankar
9)	Dimpal N Kalbande	Dkalbande.	44)	Neha p. channe	N.P. channe
10)	Chetna. S. Bandre	CBandre.	45)	Naina S. Thosar	N.S. Thosar
11)	Pallavi. K. Gothe	Pgothe.			
12)	Achal A. Banait	Abanait.			
13)	Vishakha M. Uke	V.M. Uke			
14)	Sakshi S. Vyawahare	S. S. Vyawahare			
15)	Sanskruti D. Meshram	S.D. Meshram			
16)	Khushali S. Kalkam	Kkalkam			
17)	Sanakshi T. shende	Tshende			
18)	Saloni J. Manmode	Jmanmode			
19)	Komal R. chaudhari	K.R. chaudhari			
20)	Kapilansh B. Maharkar	Bmaharkar			
21)	Harshada P. Jagdale	PJagdale			
22)	Srushti R. Dhok	R Dhok			
23)	Hteshwari D. Bangadkar	Dbangadkar			
24)	Farhat R. Sheikh	Farhat.			
25)	Achal A. Lokhande	Alokhande			
26)	Ruchika D. suryawanshi	Dsuryawanshi			
27)	Mrunali C. Nagmote	Mnagmote			
28)	Oshika H. Ghughuskar	Ghughuskar			
29)	Tejaswini R. Kharpariya	R			
30)	RUTUJA S. Dhareme	R Dhareme			
31)	Khushi G. Dhonde.	K.G. Dhonde			
32)	Pimpal R. Gawand	P.R. Gawand			
33)	Krunali P. Bodhale	Pbodhale			
34)	Riddhi V. Kalbande	Rkalbande			
35)	Bhagyashree V. channe	B.V channe			

Head, Chemistry Deptt
Mahira Mahavidyalaya, Kato'

NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT- 1

Class: B.Sc. Sem-II, P-I **Section: Grant** **Date:17/04/2023**

Sr. No.	Name of the Student	Signature	Sr. No.	Name of the Student	Signature
1)	Ayan S. Shaikh	A.Shaikh	37)	Rajshree R. Rewatkar	Rewatkar
2)	Vikki V. Dable	Vikki	38)	Tina S. Yelekar	Yelekar
3)	Kasruti R. Bhise	K.R.Bhise	39)	Khushali D. Thombre	Thombre
4)	Rakesh M Yadav	RMYadav	40)	Lakita U. Makde	Lamakde
5)	Sameer S. Atram	Sameer.S.Atram	41)	Neha. N. Patil	Neha patil
6)	Ashwini V. Kambale	Kambale	42)	Janhavi N. mehar	J.N. mehar
7)	Anjali R. Dhongade	Anjalidongade	43)	Mayuri P. Pundlaya	Mayuri
8)	Manisha M. Aage	M.M.Aage	44)	Jayashri A. Raut	Raut.
9)	Saroj M. Baramase	Baramase	45	Shivani D Mohite	S.D.Mohite
10)	Vikas D. Barai	Barai	46	Darshika W. Sawai	Sawai
11)	Nugsen R. Bansod		47)	Arti C. Kumeriye	Akumeriye
12)	Sharda O. chandele	S.O.chandele	48)	Kalyani C. Kalbande	Kalbande
13)	Sneha P. Bandhane	S.P.Bandhane	49)	Rasika K. waghe	Kwaghe
14)	Bhavna M. Kutte	B.M.Kute	50)	Vaishnavi L. Nilbade	Vaishnavi
15)	Hemlata R. Kale	H.R.Kale	51)	Kalyani B. Babhulkar	Babhulkar
16)	khushbu s. chopde	K.schopde	52)	Vinay G. Bagde	Vinay Bagde
17)	Disha A. Gawadkar	D.A.Gawadkar	53.	Pankaj H. Rajurkar	Rajurkar
18)	Kishori R Batange	Kbatange	54)	Manthan R. Kapare	Kapare
19)	Chhakuli M Wadute	Chwadute	55)	Viraj S Nagre	Snagre
20)	Ruchika P Malvi	Rmalvi	56)	Shivprasad P. Suryawanshi	Psuryawanshi
21)	Tanuksha C. Dongare	Cdongare	57	Nandini R. Charpe	Rcharpe
22)	Aparna G. Chinchmalatpure	Gchinchmalatpure	58)	Ashwini Y. Meshram	Ymeshram
23)	Mitali M. Gajbhiye	Mgajbhiye			
24)	Divyani D. Banait	Dbanait			
25)	Divya S. Chapekar	Schapekar			
26)	Rutuli R. Ingole	R.Ingole			
27)	Achal S Dhamande	Adhamande			
28)	Dhanavi S. Somkuwar	Dsomkuwar			
29)	Prachi R. Tekade	Rtekade.			
30)	Purva S. Kharpkar	Skharpkar			
31)	Pooja A. Dambhale	Adambhale			
32)	Sejal M. Wadule	Swadule			
33)	Madhuri. M. Sarwade	Msarwade			
34)	Shivani P. Mohankar	Pmohankar			
35)	Rasika A. Sirsam	Asirsam			
36)	Khushi H. Raut	K.Raut			

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

ASSIGNMENT- SHEET

Class: B.Sc. Sem -III, P-II (Organic Chemistry) **Section:** Grant **Date:** 02/10/2023

Sr. No.	Name of the Student	Assignment -I	Assignment -II	Assignment -III	Signature
1.	Divya S. Chafekar	✓	✓	✓	Chafekar
2.	Hemlata R. Kale	✓	✓	✓	H.R. Kale
3.	Ashwini Y. Kambale	✓	✓	✓	Kambale
4.	Saroj M. Barmase	✓	✓	✓	Barmase
5.	Anjali R. Dhongade	✓	✓	✓	Dhongade
6.	Mitali M. Gajbhiye	✓	✓	✓	Gajbhiye
7.	Chhakuli M. Gaudule	✓	✓	✓	M. Gaudule
8.	Neha N. Patil	✓	✓	✓	Patil
9.	Mayuri P. Patalaiya	✓	✓	✓	
10.	Sameer S. Ansari	✓	✓	✓	Sameer S. Ansari
11.	Darshika W. Sawai	✓	✓	✓	Sawai
12.	Purva S. Kharpkar	✓	✓	✓	
13.	Disha A. Girsadkar	✓	✓	✓	D.A. Girsadkar
14.	Vikas D. Barai	✓	✓	✓	D Barai
15.	Vidya S. Mazaskolhe	✓	✓	✓	Vidya
16.	Janhavi N. Mehar	✓	✓	✓	J.N. Mehar
17.	Ruchika P. Malvi	✓	✓	✓	
18.	Kamiksha C. Dongare	✓	✓	✓	Dongare
19.	Prachi R. Tekade	✓	✓	✓	
20.	Pooja A. Dambhale	✓	✓	✓	Dambhale
21.	Lakita U. Mande	✓	✓	✓	
22.	Tina S. Velekar	✓	✓	✓	
23.	Rajshree R. Rewatkar	✓	✓	✓	
24.	Rupali R. Gosle	✓	✓	✓	R. Gosle
25.	Dharavi S. Sonkuwar	✓	✓	✓	
26.	Jayashri A Raut	✓	✓	✓	Raut
27.	Khushali D. Thombre	✓	✓	✓	Thombre
28.	Rasika A. Sirsam	✓	✓	✓	Sirsam
29.	Shivani P. Mohankar	✓	✓	✓	Mohankar
30.	Madhuri M. Sarwate	✓	✓	✓	Sarwate
31.	Apama G. Chinchmalatpure	✓	✓	✓	Chinchmalatpure

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Shikshan Prasarak Mandal's

NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

Notice **Date: 14/12/2023**

All Students of B.Sc. Sem-I (Grant) are hereby informed that we are organizing a Test-I on the Unit I and Unit-II of Physical Chemistry on 18th December 2023.

Attempt the test positively. Attendance is mandatory to all students.

for Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Professor In-Charge
Mr. Kailas A. More
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Date-18/12/2023

NABIRA MAHAVIDYALAYA, KATOL
DEPARTMENT OF CHEMISTRY
Bachelor of Science (B.Sc.) Semester–I (Test -I on Unit -I & II)
CH-102 CHEMISTRY Paper- II (Physical Chemistry)

Time: Three Hours] **[Maximum Marks: 50**

N.B.: — (1) All **FIVE** questions are compulsory and carry equal marks.
(2) Write chemical equations and draw diagrams wherever necessary.

1.(A) State and explain Hess's law of constant heat summation. Calculate the enthalpy change of the following reaction:
$H_2(g) + Cl_2(g) \rightarrow 2HCl(g)$
Given that the bond dissociation energies of H – H, Cl – Cl and H – Cl are 437.0 kJ mol^{-1} ,244.0 kJ mol^{-1} and 433.0 kJ mol^{-1} respectively. 5

(B) Derive an expression for the work of expansion in an isothermal reversible process, $W_{max} = -2.303\ nRT \log \frac{P1}{P2}$
One mole of an ideal gas expands from 5 bar to 1 bar at 298 K. Calculate the work Done for reversible expansion. 5

OR

(C) What is Joule-Thomson effect? Show that in Joule-Thomson experiment the enthalpy of gas remains constant. Define Joule-Thomson coefficient. 5

(D) Explain:
(i) Average bond energy and
(ii) Bond dissociation energy.
Calculate the bond energy of C–C bond from the following data:
(i) $2C(s) + 3H_2(g) \rightarrow C_2H_6(g)$ $\Delta H = -84.7$ kJ
(ii) $C(s) = C(g)$ $\Delta H = 718.4$ kJ
(iii) $H_2(g) = 2H(g)$ $\Delta H = 435.9$ kJ
Also, give C–H bond energy as 413.0 kJ mol^{-1} 5

2. (I) What are extensive and intensive properties? Give two examples of each of them. 2½
(II) Distinguish between reversible and irreversible processes. 2½
(III) The heat of combustion of $CH_4(g)$ at constant volume is measured in a bomb calorimeter At 298 K and found to be – 885.389 KJ/mole. Find the value of enthalpy change. $2^{1/2}$
(IV) State and explain Hess's law of constant heat summation. 2½

OR

(V) Explain with examples:
(i) Intensive and (ii) Extensive properties. 2½
(VI) Show that in the Joule-Thomson experiment the enthalpy remains constant under adiabatic expansion of a real gas. 2½
(VII) Explain standard enthalpy of combustion with suitable example. 2½
(VIII) If 28 g of nitrogen is heated from 5° C to 95° C, Calculate the value of ΔE and ΔH. molar heat capacities at constant volume and at constant pressure are 20.5 and 28.814J/K/mole respectively. 2½

3. (A) Derive Kinetic gas equation, $PV = \frac{1}{3} mnu^2$ for an ideal gas. 5

(B) Define critical volume, critical temperature and critical pressure. The critical constants of NH_3 are Tc = 405 K, Pc = 112.04 atm. Find the value of Vc and van der Waal's constant 'b'. ($R = 8.314\ J\ K^{-1}mol^{-1}$). 5

OR

(C) Discuss Maxwell-Boltzmann distribution of molecular velocities. Explain graphically, how the velocities change with temperature. 5

(D) Describe critical phenomenon in the light of Andrew's experiment on CO_2 gas. The van der Waal's constants of a gas are a = 0.751 atm.dm6 mol^{-2} and b = 0.0226 $dm^3\ mol^{-1}$. Calculate its critical volume, critical pressure and critical temperature. ($R = 0.0821$ atm. $dm^3\ K^{-1}\ mol^{-1}$) 5

4. (I) Calculate the temperature at which the root mean square velocity of nitrogen molecule will be 1000 ms^{-1}. ($R = 8.314\ JK^{-1}\ mol^{-1}$) 2½

(II) Define:

(i) Mean free path
(ii) Collision diameter
(iii) Collision number. 2½

(III) Explain the deviation of real gases on the basis of van der Waal's equation. 2½

(IV) For a gas obeying van der Waal's equation, prove that $\frac{8}{3}$ Pc x Vc =RTc 2½

OR

(V) Discuss the following intermolecular forces in liquid:

(i) Dipole–Dipole interactions.
(ii) Dipole–Induced dipole interactions. 2½

(VI) Write a note on seven segment cells. 2½

(VII) Benzene takes 46 seconds to flow through the Ostwald viscometer, while water takes 56 Seconds. Calculate the viscosity of benzene, if densities of water and benzene are 0.9984×10^3 Kg m^{-3} and 0.8106×10^3 Kg m^{-3} respectively. (Given: Coeff. of Viscosity of water = 1.008×10^{-3}Kg ms^{-1}). 2½

(VIII) What is the refractive index of the medium? How can it be determined by Abbe's refractometer? 2½

5. Attempt any **ten** questions:

(i) Define state function.

(ii) Give two statements of first law of thermodynamics.

(iii)Define standard states.

(iv) State Avogadro's law.

(v) What is meant by an Ideal gas?

(vi) Define Boyle temperature

(vii) Which of the following properties are intensive properties?
Entropy, surface tension, chemical potential, specific heat, temperature.

(viii) If the gas is allowed to expand from higher pressure region to lower pressure region through the porous plug above the inversion temperature, what will be the value of Joule-Thomson coefficient?

(ix)Define heat of reaction.

(x) What is meant by an Ideal gas?

(xi) Give the relationship between average velocity and most probable velocity.

(xii) Define compressibility factor.

Nabira Mahavidyalaya, Katol

Bachelor of Science (B.Sc.) Semester–I, UNIT TEST- I

CHEMISTRY (Physical Chemistry)

Paper-II

ATTENDANCE SHEET

Date-18/12/2023 **Time-09:30 am to 12:30 pm**

Sr. No.	Name of Student	Sign
1)	Divyani Dhanraj Surjuse	Surjuse
2)	Shubhangi Omprakash Chandele	Schandele
3)	Kunali Pramod Bodhale	Bodhale
4)	Dimpal Rajendra Gawande	D.R.Gawande
5)	Tica Raju Mahaniya	Rmahaniya
6)	Achal Anil Banait	Abanait
7)	Tejaswini Ramchand Kharpurije	Kharpurije
8)	Pallavi Khemraj Gathe	Gathe.
9)	Devyani Suresh Dawale	D.S.Dawale
10)	Srushti Rajiv Nimburkar	Srushti
11)	Rutuja Sudhir Bhagme	R.S.Bhagme
12)	Khushi Girish Dhonde	K.G.Dhonde
13)	Sanskruti Devanand Meshram	S.D.Meshram
14)	Dipali Dilip Mahapure	Mahapure
15)	Oshika Hariharayan Ghugushkar	Ghugushkar
16)	Sakshi Narendra Fuse	Sakshi
17)	Srushti Ratnakar Dhok	Srushti
18)	Anushka Sunilrao Ingole	Ingole
19)	Prachi Raju Nehare	Nehare
20)	Harshada Pramod Jagdale	Jagdale
21)	Samruddhi Devendra Yeole	Yeole.
22)	Riddhi vijay Kalbande	Kalbande
23)	Janhavi vasudeo Gharad	Janhavi.
24)	Dimpal Hemraj Kalbande	
25)	Chetna Sunil Bondre	Bondre.
26)	Rohan Hafeez Sheikh	
27)	Chetan Shyamram Bewalkar	CBewalkar.
28)	Swapnil Shankar kuhale	Swapnil.
29)	Rudra Ajay Bisani	RudraB
30)	Saloni Janardhan Manmode	Manmode
31)	Komal Ramesh chaudhari	Kchaudhari
32)	Neha pramodrao channe	N.P. channe
33)	Bhagyshree vinod channe	B.V. channe
34)	Khushali sahebrao kallam	Kkallam.
35)	Trupti Niranjanji charde	Charde
36)	Bharti Devidas Raut	BRaut

Head, Chemistry Deptt
Nahira Mahavidyalaya, Katol

नबीरा महाविद्यालय, काटोल

परीक्षा _____ (1)

नांव Shubhangi Omprakash Chandele

वर्ग B.Sc 1st years विषय Chemistry रोल नं. _____

	1	2	3	4	5	एकूण
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	6	7	8	9	10	
गुण						

तारीख : 18 / 12 / 2023

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

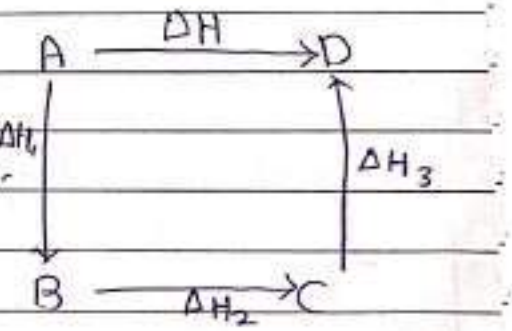
Que. 1

7½

A]

⇒① Statement :- Hess's law of constant heat of a summation is define as "The total amount of enthalpy is depend upon the nature of initial reactant and the nature of final product and independant of the path followed by the reaction."

② Consider the reaction has initial state A. and final state D It has two way to give product :-



1st way : A → D

ΔH = ΔH

2nd way : A → B → C → D

ΔH = ΔH1 + ΔH2 + ΔH3

This is the heat of summation.

3) It is the law of heat of summation
4) It is used to calculate heat exactly slow reaction
5) It is used to determine heat of transition
6) It is also used to calculat heat of reaction which take place directly.

2) ⇒ Given:- $\Delta H_1 = 437.0 kJ\,mol^{-1}$ for H-H bond
$\Delta H_2 = 224.0 kJ\,mol^{-1}$ for Cl-Cl bond
$\Delta H_3 = 433.0 kJ\,mol^{-1}$ for H-Cl bond

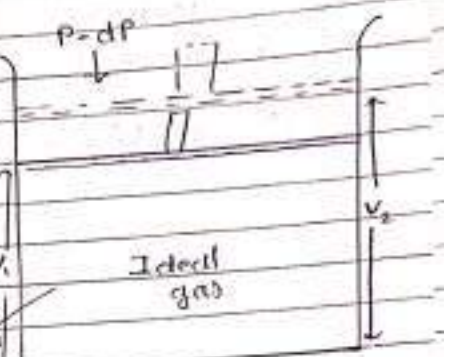
The reaction is,

$H_{2(g)} + Cl_{2(g)} \longrightarrow 2HCl_{(g)}$

B] Consider an ideal gas enclosed in cylinder fitted with frictionless and weightless piston. as shown in fig.

Let V_1 be the volum of a gas at constant temperature and pressure P

P-dP applied pressure to the piston.



Now the piston is moved Hence the small work done is,

$dW = -(P - dP)dV$

$dW = -PdV - dPdV$ — ①

∴(-ve sign due to the expansion of the system)

from eqn ① dP dV are very small hence it can be neglected.

$dW = -PdV$ — ②

To find, total work done then take Integrating eqn ② from limits V_1 to V_2, we get,

$W = -\int_{V_1}^{V_2} PdV$ — ③

for an Ideal gas $P = \frac{nRT}{V}$ or $PV = nRT$

put the value of P in eqn ③

$W = -\int_{V_1}^{V_2} \frac{nRT}{V} . dV$ — ④

Hence the work done is maximum in isothermal reversible process.

④ $\Rightarrow W_{max} = -\int_{V_1}^{V_2} nRT \frac{dV}{V}$

$= -nRT \int_{V_1}^{V_2} \frac{dV}{V}$

$= -nRT \left[\ln \frac{V_2}{V_1}\right]$

$W_{max} = -2.303\, nRT \log \frac{V_2}{V_1}$ — ⑤

For Ideal gas, $P_1V_1 = P_2V_2$

$\frac{V_2}{V_1} = \frac{P_1}{P_2}$

put this value in eqn ⑤, we get

⑤ $\Rightarrow$ $\boxed{W_{max} = -2.303 nRT \log \frac{P_1}{P_2}}$

This is expression of the work of expansion in an isothermal reversible process.

$\Rightarrow$ Given :- $n = 1$ mole

$R = 8.314\ KJ\ mol^{-1}$

$P_1 = 5$ bar

$P_2 = 1$ bar

$T = 298K$

we know that, $W_{max} = ?$

$W_{max} = -2.303\, nRT \log\left[\frac{P_1}{P_2}\right]$

$= -2.303 \times 1 \times 8.314 \times 298 \times \log\left[\frac{5}{1}\right]$

$= -5705.84 \times 0.6989$

$\boxed{W_{max} = -3987.81 J} \Rightarrow \boxed{W_{max} = -3.987 KJ}$

नबीरा महाविद्यालय, काटोल

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तारीख : / /२०

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

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Que. 2 07½

I] Extensive property :- The property which depend upon the amount of mattar of the system. This property is called as extensive property.

ex :- Mass, volume, density, etc.

Intensive property :- The property which independant on the amount of matter of the system. This Property is called as Intensive property.

ex :- Temperature, Enthalpy etc.

II]

I)

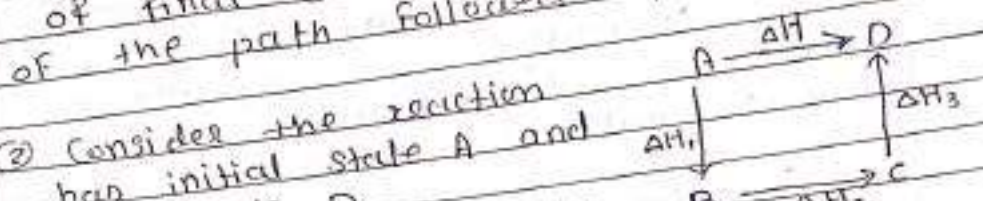
Irreversible process	Reversible process
1) The process in which the product can be give directly is called as Irrevesible process	1) The process in which the product can not give directly is called as Revessible process.
2) This processes can not be reversed.	2) This process can be reversed.
3] The process is finite process	3] This process is Infinite process
4] This process are not in equilibrium condition	4] This process are in equilibrium condition.
5) Ex:- Tea	5) Ex:- Cooling of ice.

II)- Given:- $T = 298\ K$

IV]

① Hess's law of constant heat of Summation is define as the total amount of enthalpy is depend upon nature of initial reactant and nature of final product. Independent of the path followed by the reaction."

② Consider the reaction has initial state A and final state D
It has two way to give product :-



1st way :- $A \rightarrow D$
2nd way :- $\Delta H = \Delta H$
2nd way :- $A \rightarrow B \rightarrow C \rightarrow D$
$\Delta H = \Delta H_1 + \Delta H_2 + \Delta H_3$
This is the heat of summation

V)

② It is the law of heat of summation
④ It is the used to calculate exactly slow reaction.
⑤ It is used to calculate heat of the reaction which take place directly
⑥ It is also determined by the heat of transmition.

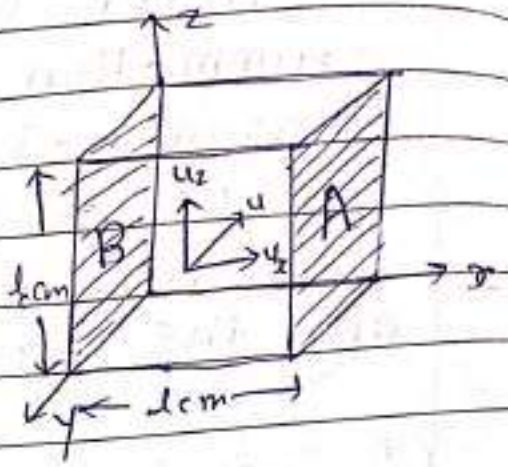
Que. 3

A] Consider cubical container take in of an ideal gas as shown in fig.

let n → molecules in the container

m → mass of each gas molecule

lcm → length of each side of cube.



Consider a molecule moving with velocity u in any direction. velocity is vector quantity. Velocity divide in to three components u_x, u_y and u_z are in x, y and z axises as shown in fig. Then mathematically, $u^2 = u_x^2 + u_y^2 + u_z^2$

Now consider molecule strike on face A with velocity u_x and rebounce with velocity $-u_x$. On face B.

Then the total travelled is = 2l

Hence, Time require to collision of molecule from A to B = $\frac{2l}{u_x}$ sec.

(i) The number of collision per second

$$= \frac{2l}{u_x}$$

(ii) Each impact of molecule is the momentum before impact is equal to the momentum after impact.

The momentum before impact = mu_x

The momentum after impact = $-mu_x$

Total momentum is =

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	6	7	8	9	10	
गुण						

तारीख : / /२०

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Change in momentum $= mu_x - (-mu_x)$

$= 2mu_x$

(iii) But, no. of collision per second

$= \frac{u_x}{2l}$

Then It can be written as: ~~along x-axis~~

$= 2mu_x \left(\frac{u_x}{2l}\right)$

$= \frac{mu_x^2}{l}$

But the collision will be double along x-axis, $= \frac{2mu_x^2}{l}$

similarly collision will be double along y and z-axes are $\frac{2mu_y^2}{l}$ and $\frac{2mu_z^2}{l}$ resp.

6] Critical temp:- The maximum temperature at which the gas can liquified are called as Critical temperature.

Critical pressure:- The pressure required to liquify at critical temp. called as critical pressure.

Critical volume:- The volume occupied by the one mole of gas at critical temp and critical pressure are called as critical volume.

⇒ Given :- $T_c = 405K$, $P_c = 112.04$ atm
$R = 8.314\ J\ K^{-1} mol^{-1}$
$V_c = ?$ $b = ?$

we know that,

$$T_c = \frac{8a}{27Rb} \quad \text{—①}$$

$$P_c = \frac{a}{27b^2} \quad \text{—②}$$

divide eqn ① by ②, we get,

$$\frac{T_c}{P_c} = \frac{8a}{27Rb} \times \frac{27b^2}{a}$$

$$= \frac{8b}{R}$$

$$\frac{T_c}{P_c} = \frac{8}{R} b$$

$$b = \frac{T_c}{P_c} \times \frac{R}{8} = \frac{405}{112.04} \times \frac{8.314}{8} = 3.75$$

$$V_c = 3b = 3 \times 3.75 = 11.25 \text{ lit } mol^{-1}$$

Hence change in momentum :-

$$= \frac{2mu_x^2}{l} + \frac{2mu_y^2}{l} + \frac{2mu_z^2}{l}$$

$$= \frac{2m}{l}(u_x^2 + u_y^2 + u_z^2)$$

$$= \frac{2mu^2}{l} \qquad (\because u^2 = u_x^2 + u_y^2 + u_z^2)$$

But n molecule are in container
Hence, change in momentum $= \frac{2mnu^2}{l}$

(iv) Force is define as change in momentum per second $= \frac{2mnu^2}{l}$

Area of surface of cube $= 6l^2$

$$\text{Pressure } (P) = \frac{\text{Force}}{\text{Area}} = \frac{2mnu^2}{l} \times \frac{1}{6l^2}$$

$$P = \frac{1}{3} \frac{mnu^2}{l^3}$$

But $l^3 \Rightarrow$ volume of cube

$$P = \frac{1}{3} \frac{mnu^2}{V}$$

$$PV = \frac{1}{3} mnu^2$$

$$PV = \frac{1}{3} Mnu^2$$

This is Kinetich gas eqn.

(B) Critical temp :- The ten maximum temperature at which the gas can liquified are called as critical temperature.

Critical pressure :- The pressure requires to liquify at critical temp. called as critical pressure.

Critical volume :- The volume occupied by the one mole of gas at critical temp and critical pressure are called as critical volume.

⇒ Given : $T_c = 405K$, $P_c = 112.04$ atm
$R = 8.314\ J\ K^{-1} mol^{-1}$
$V_c = ?$ $b = ?$

we know that,

$$T_c = \frac{8a}{27Rb} \quad \text{—①}$$

$$P_c = \frac{a}{27b^2} \quad \text{—②}$$

divide eqn ① by ②, we get,

$$\frac{T_c}{P_c} = \frac{8a}{27Rb} \times \frac{27b^2}{a}$$

$$= \frac{8b}{R}$$

$$\frac{T_c}{P_c} = \frac{8}{R} b$$

$$b = \frac{T_c}{P_c} \times \frac{R}{8} = \frac{405}{112.04} \times \frac{8.314}{8} = 3.75$$

$$V_c = 3b = 3 \times 3.75 = 11.25 \text{ lit } mol^{-1}$$

Que 14 10

I] Given : T = ?

$u = 1000\ ms^{-1}$

$R = 8.314\ JK^{-1}mol^{-1}$

molecular weight of nitrogen is 28×10^{-3} kg

Now, $u = \sqrt{\frac{3RT}{M}}$

Squaring both side

$$u^2 = \frac{3RT}{M}$$

$$T = \frac{Mu^2}{3R}$$

$$T = \frac{28 \times 10^{-3} \times (1000)^2}{3 \times 8.314}$$

$$T = \frac{28 \times 10^{-3} \times 10^6}{24.942}$$

$$T = 1.12260 \times 10^3$$

$$\boxed{T = 1122.60\ K}$$

II) i) mean free path :- The path travelled by the gas without collision called as free path.

ii) The mean path travell by the gas molecule between two sucessive collision is called as mean free path.

नबीरा महाविद्यालय, काटोल

परीक्षा _____

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तारीख : / /२०

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

ii) Collision diameter :- The wo gas molecule approces eath other. They can not come very close to each other : If they come close position the distance betn two nucleous of two gas molecule is called as collision diameter.

iii] Collision number :- The total no. of molecule in gass per second per unit volume is called as collision number.

III] Van der wall eqn is,

$$\left(P + \frac{a}{V^2}\right)(V - b) = RT$$

$$PV + \frac{a}{V} - Pb - \frac{ab}{V^2} = RT \quad \text{— (1)}$$

from the eqn ① hence a and b are very small and v2 are very larger value then $\frac{ab}{v^2}$ are neglect

① $\Rightarrow$ $PV + \frac{a}{V} - Pb = RT$ — ②

At low pressure :- When P is low, the term Pb can be neglected.

$PV + \frac{a}{V} = RT$ $\quad PV < RT$

$Z = \frac{PV}{RT} < 1$

Hence At low pressure real gas show negative deviation from ideal gas

At high pressure :- When P is high the term $\frac{a}{V}$ are neglected.

$PV - Pb = RT$ $\quad PV > RT$

$Z = \frac{PV}{RT} > 1$

∴ Hence At high pressure real gas show positive deviation from ideal gas.

At high temperature :- When T is high the ~~them~~ term Pb and $\frac{a}{V}$ are very small then Pv the bothe Pb and $\frac{a}{V}$ are neglected.

$Pv = RT$

∴ At high temp. real gas behaves like ideal gas.

IV] for vander waal's eqn is,

$\left(P + \frac{a}{V^2}\right)(V$

we know that the eqn of critical temp, critical pressure & critical volume,

$V_c = 3b$ — ①

$P_c = \frac{a}{27b^2}$ — ②

$\therefore T_c = \frac{8a}{27Rb}$ — ③

from eqn ① , $b = \frac{V_c}{3}$ — ④

put in eqn ② , we get,

② $\Rightarrow P_c = \frac{a}{27\left(\frac{V_c}{3}\right)^2}$

$P_c = \frac{a}{3V_c^2}$

$\therefore a = 3P_cV_c^2$ — ⑤

Put the eqn ④ & ⑤ in eqn ③

③ $\Rightarrow T_c = \frac{8(3P_cV_c^2)}{27R\left(\frac{V_c}{3}\right)}$

$T_c = \frac{8}{3}\frac{P_cV_c}{R}$

$\therefore \frac{8}{3}P_cV_c = T_cR$

Hence proved.

3)

Que. 5

v] Ideal gas :- ~~It~~ in an ideal obey the eqn $pv = nRT$.

xii] Compressibility factor :- To extend which real gas depart from Ideal gas behaves called as Compresibility factor.

$$z = \frac{pv}{RT}$$

i] ~~It~~ State function :- The gas go back to its initial state and it independ upon the path. called as state function.

vi] Boyle's temperature :- The temperature at which real gas from Ideal behavior is called as Boyle's temperature.

viii] The value of Jute-Thomson coefficient is zero.

$$\mu_{JT} = 0$$

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NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

B++ NAAC

Notice **Date: 19/12/2023**

All Students of B.Sc. Sem-I are hereby informed that we are organizing a Practice pre-examination on the whole syllabus of Physical Chemistry-paper II, on 27th Dec. 2024.

Attempt the exam positively. Attendance is mandatory to all students.

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Professor In-Charge
Mr. Kailas A. More
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Date-27/12/2023

NABIRA MAHAVIDYALAYA, KATOL

DEPARTMENT OF CHEMISTRY

Bachelor of Science (B.Sc.) Semester–I (Pre-Exam)

CH-102 CHEMISTRY Paper- II (Physical Chemistry)

Time: Three Hours] **[Maximum Marks: 50**

N.B.: — (1) All **FIVE** questions are compulsory and carry equal marks.
(2) Write chemical equations and draw diagrams wherever necessary.

1. (A)Derive an expression for w, q, ΔE and ΔH for expansion of gases under isothermal reversible process.
Calculate the work done by the gas if two moles an ideal gas at the initial pressure of 3 atmosphere at 0 °C were expanded reversibly under isothermal conditions to a final pressure of 0.3 atm. ($R=8.314 J. K^{-1}mol^{-1}$) 5

(B)Explain: -
(i) Average bond energy and
(ii) Bond dissociation energy.
Calculate the enthalpy change of the following reaction:
$H_{2(g)} + Cl_{2(g)} \rightarrow 2HCl_{(g)}$
Given that the bond dissociation energies of H–H, Cl–Cl and H–Cl are 437.0 kJ mol^{-1}. 244.0 kJ $mol^{-1}$and 433.0 kJ mol^{-1}respectively.
5

OR

1. (C) What are extensive and intensive properties? Give two examples of each of them. 2½

(D) Distinguish between reversible and irreversible processes. 2½

(E) The heat of combustion of $CH_4(g)$ at constant volume is measured in a bomb calorimeter At 298 K and found to be – 885.389 KJ/mole. Find the value of enthalpy change. 2½

(F) State and explain Hess's law of constant heat summation. 2½

2.(A) Discuss Maxwell-Boltzmann distribution of molecular velocities.
Explain graphically, how the velocities change with temperature. 5

(B) Describe critical phenomenon in the light of Andrew's experiment on CO_2 gas. The van der Waal's constants of a gas are a = 0.751 atm.dm6 mol^{-2} and b = 0.0226 dm^3 mol^{-1}. Calculate its critical volume, critical pressure and critical temperature.
($R = 0.0821$ atm. $dm^3 K^{-1} mol^{-1}$) 5

OR

(C) Calculate average velocity and most probable velocity of sulphur dioxide molecule at 700 K. Given that root mean square velocity of sulphur dioxide molecule is 522.3 ms^{-1}. 2½

(D) Define the terms: -
(i) Mean free path and
(ii) Collision diameter. 2½

(E) What is an ideal gas? Discuss the deviation of real gases from ideal behaviour. 2½

(F) Using Vander Waal's equation, deduce the reduced equation of state. 2½

3.(A) What are liquid crystals? Discuss structure and properties of nematic and cholesteric liquid crystals. 5

(B) How can surface tension of a liquid be determined by capillary rise method? A glass capillary of diameter 0.25 cm is dipped in water. Calculate the height to which liquid will rise if density and surface tension of water are 0.9984×10^3 kg m^{-3} and 0.0727 Nm^{-1} respectively. (Given: g = 9.806 ms^{-2}) 5

OR

3.(C) Discuss the following intermolecular forces in liquids:

(i) Dipole-induced dipole interaction and 2½

(ii) London-forces. 2½

(D) Write short note on Thermography. 2½

(E) How is surface tension of liquid determined by drop number method? 2½

(F) Define refractive index. The refractive index of liquid benzene at 298 K is 1.7000 and its density is 0.77×10^3 kg m^{-3}. Find the molar refraction of liquid Benzene at 298 K. 2½

4. (A) What do you understand by adsorption isotherm? Explain Freundlich adsorption isotherm. How can it be verified? 5

(B) Explain (i) Brownian movement and (ii) Tyndall effect of colloidal sols. 5

OR

4. (C) Discuss the types of adsorptions with suitable examples. 2½

(D) Give the classification colloids? 2½

(E) Describe Hardy and Schulze rule. 2½

(F) Give important difference between elastic gels and non-elastic gels. 2½

5. Attempt any **TEN** questions of the following:

(i) Define state function.

(ii) Give two statements of first law of thermodynamics.

(iii) Define standard states.

(iv) State Avogadro's law.

(v) What is meant by an Ideal gas?

(vi) Define Boyle temperature.

(vii) Give any two uses of liquid crystal.

(viii) Why the liquid drop is spherical?

(ix) What is reduced viscosity?

(x) What are adsorbates and adsorbents?

(xi) Give two examples of enzyme catalysis.

(xii) What are promoters?

1×10=10

Nabira Mahavidyalaya, Katol

Bachelor of Science (B.Sc.) Semester–I, PRE-EXAM

CHEMISTRY (Physical Chemistry)

Paper-II

ATTENDANCE SHEET

Date-27/12/2023 **Time-09:30 am to 12:30 pm**

Sr. No.	Name of Student	Sign
1)	Divyani Dhanraj Surjuse.	Surjuse
2)	Tejaswini Ramchand Kharpurye	Kharpurye
3)	Tina Raju Mahobiya	Mahobiya
4)	Devyani Suresh Dawane	Dawane.
5)	Sakshi Narendra Fuse	Sakshi
6)	Srushti Ratnakar Dhok	Dhok
7)	Riddhi Vijay Kalbande	Kalbande
8)	Harshada Pramod Jagdale	Jagdale
9)	Sanskruti Sudhakar Gajbhe	S. S Gajbhe
10)	Gauri Pramod Raut	Gauri.
11)	Trupti Niranjan Charde	Charde
12)	Khushali Sahebrao Kalam	K. Kalam
13)	Bharti Devidas Raut	Raut.
14)	Srushti Raju Nimburkar	Srushti
15)	Nemeera Sunil Sayam	Sayam.
16)	Farhat Naz Sheikh Rasheed	Farhat
17)	Sanskruti Devanand Neshram	S. D. Neshram
18)	Anjali D. Sambhare	Sambhare
19)	Achal A. Banait	Banait
20)	Sudhanshu J. Amale	Amale.
21)	Pallavi K. Gothe	Gothe

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Shikshan Prasarak Mandal's

NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

Notice **Date: 23/04/2024**

All Students of B.Sc. Sem-II (Grant) are hereby informed that we are organizing a Unit Test on the topic "Structure and Bonding and Organic Reaction Mechanism" on 25th April 2024.

Attempt the test positively. Attendance is mandatory to all students.

for

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Professor In-Charge

Mr. Kailas A. More
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

NABIRA MAHAVIDYALAYA, KATOL

Department of Chemistry

Unit Test -I (Summer-2024)

Subject- Chemistry-I (Organic Chemistry) P-I

Class- B.Sc.-I Sem-II

Time: 3 Hours **Maximum Marks: 20**

Note- (1) All questions are compulsory and carry equal marks.

(2) Write chemical equations and draw diagrams wherever necessary.

Q.1. (A) Define and classify hydrogen bonding. Explain effect of hydrogen bonding on solubility. 5

(B) Discuss Homolytic and Heterolytic fission of covalent bond with suitable example. 5

OR

(C) What is hybridization? Explain the structure of ethane on the basis of hybridization. 5

(D) What are Reactive intermediates? Explain the formation and stability of carbocations. 5

(C) Differentiate between Inductive effect and electromeric effect. 2½

(D) Draw MO diagram of acetylene molecule. Give bond length and bond angle data involved in it. 2½

(E) Define free radicals. Discuss the stability of free radicals. 2½

(F) Define the terms :
(i) Bond length and
(ii) Bond angle. 2½

OR

(C) Write a note on Inductive effect. 2½

(D) Classify the following as electrophiles and nucleophiles :

(i) FeCl3 (ii) H2O (iii) CH3NH2 (iv) OH – and (v) BF3 2½

(E) Discuss Hydrogen bonding with reference to alcohol. 2½

(F) Define terms with example :

(i) Substitution reaction (ii) Elimination reaction. 2½

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DEPARTMENT OF CHEMISTRY

Attendance Sheet, Unit Test -I (S-24)

Class: B.Sc.-I (Sem-II) Subject: Chemistry, P-I, Section: Grant, Date: 25/04/2024

Sr. No.	Name of Students	Sign	Sr. No.	Name of Students	Sign
1	Divyani D. Surjuse	Surjuse	24	Pallavi K. Gathe	Gathe
2	Devyani S. Dawate	D.S.Dawate	25	Saloni T. Manmode	Manmode
3	Chanda R. Rathod	C.Rathod	26	Sanskruti D. Neshram	S.D.Neshram
4	Komal R Chaudhari	K.Chaudhari	27	Farhat. R. Sheikh	Farhat.
5	Monika M. Barai	Mbarai	28	Anjali D. Sembekar	Sembekar
6	Sanakshi J. Shende	Shende	29	Tina R. Mahoorya	Mahoorya
7	Khushali S. Katlam	K.Katlam	30	Swapnil S. Kohale	Swapnil
8	Trupti N. Charde	T.Charde	31	Rehan H. Sheikh	
9	Bharti D. Raut	Raut	32		
10	Krunali P. Bodhale	Bodhale	33		
11	Dimpal R. Gawande	Dimpal	34		
12	Samruddhi D. Ayele	Ayele	35		
13	Prachi R. Nehare	PRahare	36		
14	Riddhi V. Kalbande	Rkalbande	37		
15	Anushka S. Ingole	A.Ingole	38		
16	Janhavi W. Gohad	J.Gohad	39		
17	Sudhanshu Amale	Amale	40		
18	Kapilansh Mahorkar	Kmahorkar	41		
19	Alpesh Dongre	A.Dongre	42		
20	Rudra Bisani	Rudra B	43		
21	Tejaswini R. Kharpurje	T.Kharpurje	44		
22	Vishakha M. Uke	V.M.Uke	45		
23	Achal A. Banait	Abanait	46		

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

~~24~~ ~~Swapnil S. Kohale~~ Swapnil

Shikshan Prasarak Mandal's

NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

Notice **Date: 04/07/2023**

All Students of B.Sc. Sem-II are hereby informed that we are organizing a Practice pre-examination on the whole syllabus of Organic Chemistry-paper I, on 10th July 2023.

Attempt the exam positively. Attendance is mandatory to all students.

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Professor In-Charge
Mr. Kailas A. More
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Bachelor of Science (B.Sc.) Semester–II (CBS) Examination

CH-201: CHEMISTRY

Compulsory Paper—1

(Organic Chemistry)

Time: Three Hours] [Maximum Marks: 50

N.B.:— (1) All **FIVE** questions are compulsory and carry equal marks.

(2) Write chemical equations and draw diagrams wherever necessary.

1. (A) Explain:—

(i) Inductive effect and

(ii) Hydrogen bonding in alcohol. 5

(B) Discuss Homolytic and Heterolytic fission of covalent bond with suitable examples. 5

OR

(C) Explain the formation of acetylene molecules on the basis of hybridization. 2½

(D) Define:—

(i) Bond length and

(ii) Bond angle. 2½

(E) What are free radicals? Explain the formation and stability of free radicals. 2½

(F) Identify the following as electrophiles and nucleophiles: —

(i) H_2O

(ii) BF_3

(iii) H_3O^+

(iv) CN^-

(v) $R–NH_2$ 2½

2. (A) What is conformation? Explain the conformational analysis of n-Butane. 5

(B) Explain the following terms :

(i) Enantiomers and racemization of Lactic acid

(ii) Diastereomers. 5

OR

(C) What is resolution? Explain the biological method for the resolution of a racemic mixture. 2½

(D) Write a note on 'Walden Inversion'. 2½

(E) Discuss the Geometrical isomerism in maleic acid and fumaric acid. 2½

(F) Give the difference between configuration and conformation. 2½

3. (A) Discuss conformational analysis of Cyclohexane.

(B) What is Markownikoff's rule? Give the ionic mechanism of the addition to Propylene. 10 5

OR

(C) Give the mechanism of free radical chlorination of methane. 5

(D) Write a short note on LPG.

(E) How propene is prepared from:

(i) n-propyl bromide and

(ii) n-propyl alcohol 2½

(F) What happens when propylene reacts with:

(i) Alkaline cold $KMnO_4$ solution and 2½

(ii) Hot $KMnO_4$ solution?

4. (A) What are dienes? Give their classification. Write chemical reactions of 1, 3-Butadiene with (i)HBr and (ii) Br_2. 5

(B) Explain the mechanism of sulfonation of benzene with an energy profile diagram. 5

OR

(C) Explain the acidic nature of Ethyne. 2½

(D) What is Huckel's rule? Discuss the aromaticity of cyclopentadienyl anion. 2½

(E) Discuss the Diels-Alder reaction. 2½

(F) Explain the molecular orbital structure of benzene. 2½

5. Solve any **TEN** of the following:—

(i) Define Carbonium ion.

(ii) Draw M.O. Structure of Ethane molecule.

(iii) Give one example of an addition reaction.

(iv) What is Asymmetric synthesis?

(v) What is meant by a stereogenic centre?

(vi) What is racemisation?

(vii) Draw structure and give IUPAC name of neopentane.

(viii) Define Cloud Point.

(ix) Define Octane number.

(x) What is an oxyacetylene flame?

(xi) Give the polymerization reaction of acetylene.

(xii) Define lubricants. $1 \times 10 = 10$

Organic Chemistry, Paper -I

Attendance

Class: B.Sc. Sem-II Section: Grant Date: 10/07/2023

Sr. No.	Name of the Student	Signature	Sr. No.	Name of the Student	Signature
1.	Anjali. R. Dhongade	ARDhongade			
2.	Ruchika P. Malvi	Rmalvi			
3.	Khushby s chopde	kschopde			
4.	Samiksha c. Dongre	SDongre			
5.	Darshika W. Sawai	Dsawai			
6.	Kishori R Barange	Krbarange			
7.	Sameer S. Ansari	Sameer.Ansari			
8)	Khushali D. Thombre	KThombre			
9.	Rajshree R. Rewatkar	Rrewatkar			
10)	Lakita U. makde	Lmakde			
11)	Tina S. Yelekar	Tyelekar			
12)	Chhakuli M. Wadule	Cmwadule			
13)	Rasika A. Sirsam	RSirsam			
14)	Shivani P. Mohonkar	SMahankar			
15)	Om. S. Gupta	Omsg			
16)	Vikki V. Dabre	Vikki			
17)	Ayan S. Sheikh	ASheikh			
18)	Madhuri. M. Sarwade	Msarwade			
19]	Rushali R. Rampur	Rrr			
20]	Prachi P. Mahajan	Pmahajan			
21]	Shivprasad P. Suryavanshi	Spsuryavanshi			

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

M.G.

Sr. No.	Name of the Student	Signature	Sr. No.	Name of the Student	Signature
1	Bhumeshwari Khawshi	Bkhawshi			
2	Rita L. manmode	Rmanmode			
3	Pratiksha R. Sahare	Psahare			
4	Domini S. Kewate	Dkewate			
5	Sapna D. Wasekhade	Sakhade			
6	Pranali A. Utane	Putane			
7	Sneha A. Gaikwad	Sgaikwad			
8	Divya V. Mantawade	Dmant			
9	Anisha V. Bujtuk	Abujtuk			
10	Akshi R. Bujtuk	ABujtuk			
~~11~~	~~Sakshi~~				
11	Nikita p. kalmegh	Nalmegh			
12	Alfiya Shah	Alfiya			

Head, Chemistry Deptt
Nahira Mahavidyalaya, Katol

Name: Sameer S. Atram

Q.1 (A) (i) Inductive effect :- polarization induce due to adjacent bond, The inductive effect is permant Method, inductive effect occur in σ bond. The share pair of electron displacement or shifted to more electronegative atom, this shifting or displacement of elatron is called as inductive effect.

example :-

- $C - C - C \xrightarrow{\delta+ \quad \delta-} Cl$
- $C - C - C^{\delta+} - Cl^{\delta-}$
- $C - C^{\delta+} - C^{\delta+} - Cl^{\delta-}$
- $C^{\delta+} - C^{\delta+} - C^{\delta+} - Cl^{\delta-}$

The chlorine is a more electronegative atom than carbon, hence the δ− negative charge develop on Cl− atom and δ+ charge develop on C− atom. The more electronegative chlorine atom is electron lover, The carbon atom electron shifted to chlorine atom, Similarly Second Carbon and third Carbon atom electron shifted to chlorine atom and generated δ+ positive charge on C−atom.

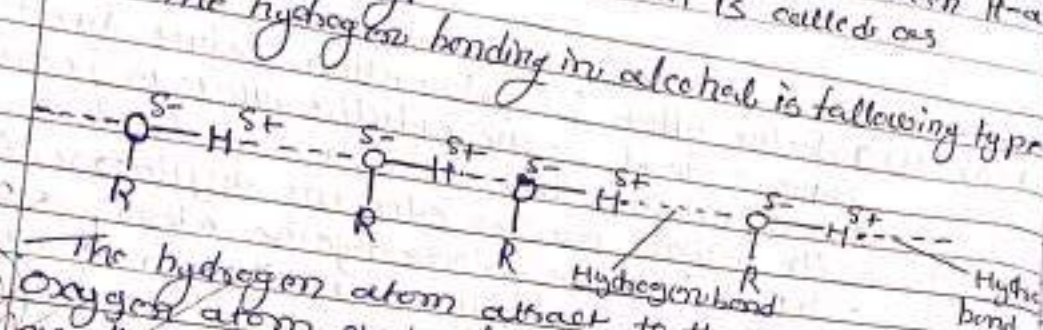
They are two type of Inductive effect

1) + Inductive effect and 2) − Inductive effect.

R-1 CA

(ii) Hydrogen bonding in alcohol :-

- The electrostatic force of attraction between H-a and more electronegative atom is called as Hydrogen bonding.
- The hydrogen bonding in alcohol is following type

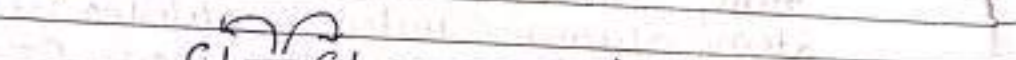


The hydrogen atom attact to the more electroneg oxygen atom and develop weaker bond is known as Hydrogen bond. The two polar atoms present in alcohol. The R-group increases the decreases Hydrogen bonding.

B) The Homolytic and Heterolytic fission of covalent bond :-

1) Homolytic bond fission :- The breaking or dissociation of covalent bond is equally distributed is known as Homolytic bond fission.

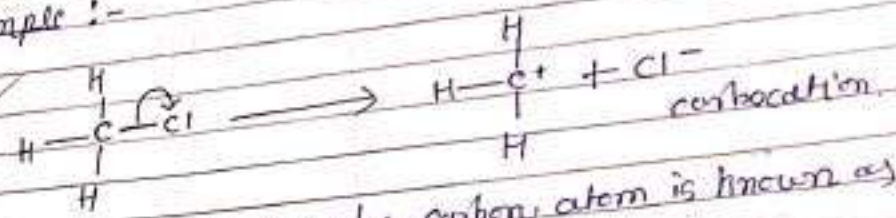
example :-



The species produce in Homolytic bond fission is known as free radical.

2) Heterolytic bond fission :- The breaking of covalent bond is unequally distributed electron Hence the one atom get two electron and another non-electron, two species produce in Heterolytic bond fission carbocation and carbanion.

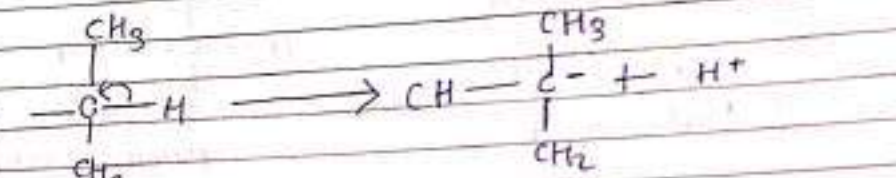
example :-



carbocation

The positive charge carry by carbon atom is known as carbocation.

The negative charge carry by carbon atom is known as carbanion



Carbanion

The carbanion act as nucleophyle.

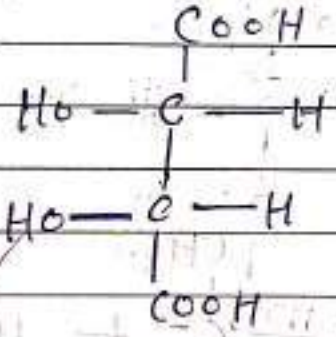
The carbanion is electron rich species.

Q. 2 (c) resolution :— The racemic mixture seprated by two active compound, Seprating of racemic mixture in two active compound is known as resolution.

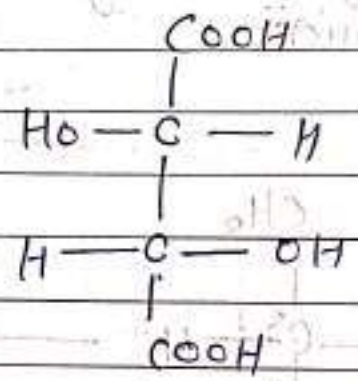
Q. 2 (f)

Configuration	Conformation
• It is occur in single bond	• It is occur in double bond.
• The atom is easally rotates	• The atom is not easally rotates

Q. 2 (e) Geometrical isomerism in maleic acid and fumaric acid.



Maleic acid



fumaric acid.

Name :- Semeor S Ahsan

2.4) (A) Dienes :-

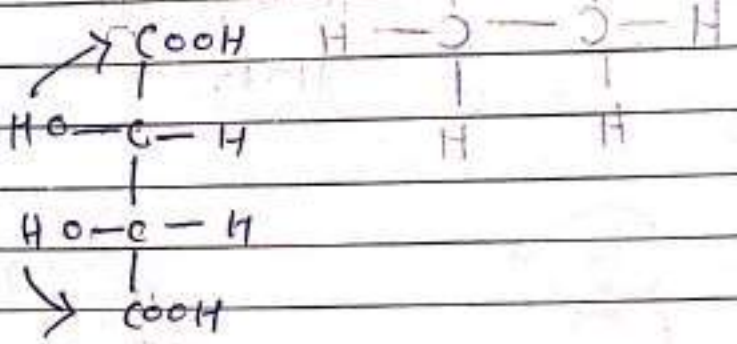
- Dienes is a unsaturated compound containing double bond.
- It is similar in alkene.
- Dienes contain double bond between two carbon atom.

1) $CH_2 = CH - CH = CH_2$

1, 3 - Butadiene.

Q.S. (vi) Racemisation :- The compound is one part rotate chlockwise direction and the another part rotate anticlockwise direction. It known as Racemisation.

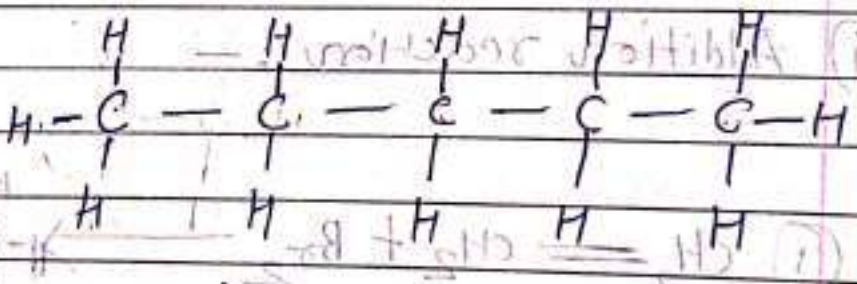
example :-



(±) form.

Q.S. (v) The four different atom or group of atom attached to the carbon atom, the centre is known as stereogenic centre.

Q.S. (vii)



n- pentane.

Shikshan Prasarak Mandal's

NABIRA MAHAVIDYALAYA KATOL

DEPARTMENT OF CHEMISTRY

Notice **Date: 05/01/2024**

All Students of B.Sc. Sem-III are hereby informed that we are organizing a

Practice pre-examination on the whole syllabus of Organic Chemistry-paper II, on 08th Jan. 2024.

Attempt the exam positively. Attendance is mandatory to all students.

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

Professor In-Charge
Mr. Kailas A. More
Assistant Professor
Department of Chemistry
Nabira Mahavidyalaya, Katol

Nabira Mahavidyalaya, Katol
Bachelor of Science (B.Sc.) Semester–III, Pre-Exam
CHEMISTRY (Organic Chemistry)
Paper-II

Time: Three Hours] **[Maximum Marks : 50**

N.B.: — (1) All **FIVE** questions are compulsory and carry equal marks.
(2) Write chemical equations and draw diagrams wherever necessary.

1. (A) What are activating and deactivating groups? Explain meta-directive influence of $-NO_2$ group in Nitrobenzene for further electrophilic substitution. 5

(B) Explain the alkaline hydrolysis of ter. butyl bromide with reference to:
(i) Reaction
(ii) Kinetics
(iii) Mechanism
(iv) Energy profile diagram. 5

OR

(C) How will you prepare biphenyl from iodobenzene? Name the reaction. 2½

(D) How chlorobenzene obtained by:
(i) Sandmeyer's reaction and
(ii) Raschig's process. 2½

(E) Give the preparation of chloroform from ethanol. 2½

(F) Give any two preparation of toluene. 2½

2. (A) Give a method of preparation of glycerol starting from propylene. What is the action of excess of HI on it? 5

(B) Discuss the reaction and Mechanism of Reimer-Tiemann reaction. 5

OR

(C) Discuss the mechanism of Pinacol-Pinacolone rearrangement reaction. 2½

(D) What is the action of following on ethylene glycol:
(i) Con. HNO_3 and
(ii) $Pb(CH_3COO)_4$ OR HIO_4? 2½

(E) Discuss acidic nature of Phenol on the basis of resonance stabilization of Phenoxide ion. 2½

(F) Write note on Gattermann Synthesis. 2½

3. (A) Discuss the mechanism of Cannizaro's reaction with suitable example. 5

(B) How will you obtain: —
(i) Acetaldehyde from acetyl chloride
(ii) Acetophenone from Benzonitrile? Discuss the structure of Carbonyl group in Aldehyde and Ketones. 5

OR

(C) Write a note on Wolff-Kishner reduction. 2½

(D) Explain the Perkin reaction. 2½

(E)Write reduction reaction of Acetaldehyde with $LiAlH_4$ and $NaBH_4$. 2½

(F) What is the action of following on acetaldehyde?

(i) Tollen's reagents

(ii) Fehling solution 2½

4. (A)Write the synthesis and applications of DDT and BHC. 5

(B) What are esters? What is the action of following on Ethyl acetate:

(i) Ammonia

(ii) Water

(iii) $LiAlH_4$ and

(iv) Grignard's Reagent? 5

OR

(C)Discuss the advantages and disadvantages of Agrochemicals 2½

(D) Write a note on Hell-Volhard-Zelinsky reaction. 2½

(E) Discuss the synthesis and application of Endosulphan. 2½

(F) What is the action of heat on:

(i) Succinic acid and

(ii) Phthalic acid? 2½

5. Solve any **ten** of the following:

(i) What is the effect of fuming HNO_3 on Toluene? 1

(ii) What is O/P ratio?. 1

(iii) Write the substrate for SN1 reaction. 1

(iv) Give the structure of Sorbitol. 1

(v) Give the uses of glycerine. 1

(vi) Draw resonance structure of phenoxide ion. 1

(vii) How acetone is obtained from methyl cyanide? 1

(viii) What is the action of peracetic acid on acetone? 1

(ix) Define alpha hydrogen atom in ketone . 1

(x) Give any two physical properties of carboxylic acid. 1

(xi) Define rodenticides. 1

(xii) How is ethyl acetoacetate obtained from ethyl acetate? 1

नबीरा महाविद्यालय, काटोल

परीक्षा

नांव Sameer S. Aram

वर्ग Bsc III - Sem विषय Chemistry - II रोल नं.

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गुण						
	6	7	8	9	10	
गुण						

तारीख 08 / 01 / 2024 परीक्षकाची सही

टिप : १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे.
२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.
३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

21/50 Good

(Q.1 – A)

⇒ • Activating group :-

• When substituted benzene derivative more rapidly react than that of benzene; that then substituent are called as Activating group. for example Methoxy benzene are more react than that of Benzene. Such activating group are, $-CH_3$, $-NH_2$. etc.

• It means that, the each substituent group present on benzene ring and further substitution take place, the incoming electrophile attack on ortho and para position.

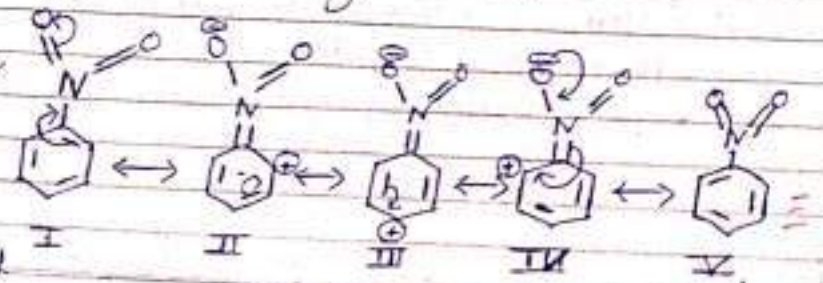
• The activating group are ortho – para directing in nature.

• Deactivating group :-

• When substituted benzene derivative more slowly react than that of benzen, That they substituent are called as deactivating group.
• for example, the bromination of Nitrobenzene are more slower than bromination of benzene.
• The deactivating group are Meta directing in nature.
• Such deactivating group are, $-NO_2$
• It means that, If substituent present on benzene ring and further substitution take place, the incoming electrophile attack Meta position.

• Meta-directive influence of $-NO_2$ group in Nitrobenzene :-

• The Nitro group ($-NO_2$) are more electro negative group, Hence Nitro-group attract electron from benzen ring, Hence they show Meta-directing nature.



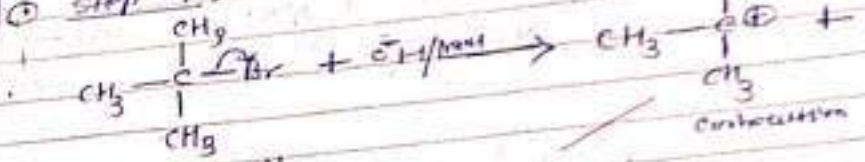
Resonating structure.

Q.1 - B) Alkaline Hydrolysis of tert. butyl bromide:

• It is also known as S_N1 reaction
• It is two-step reaction.

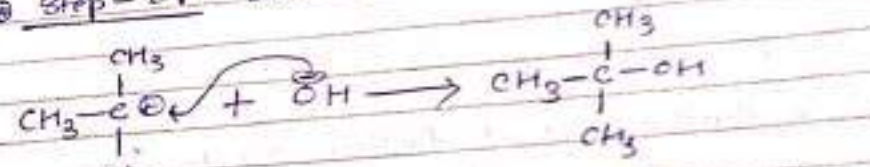
⊙ Reaction :- $C(CH_3)_3Br + KOH \longrightarrow C(CH_3)OH + KBr$

⊙ Step-1 :- Formation of Carbocation



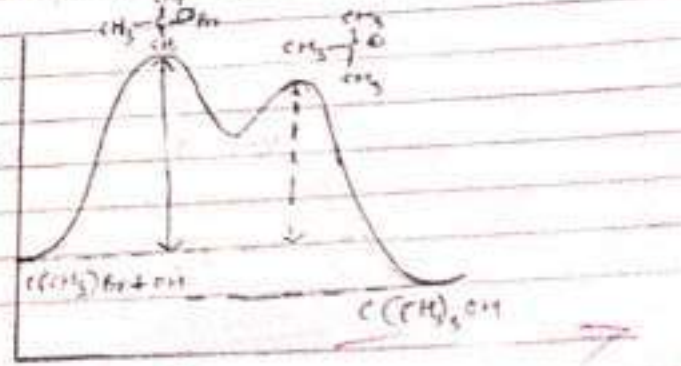
Tert. butyl bromide — Carbocation

⊙ Step-2 :- attack of Nucleophile.

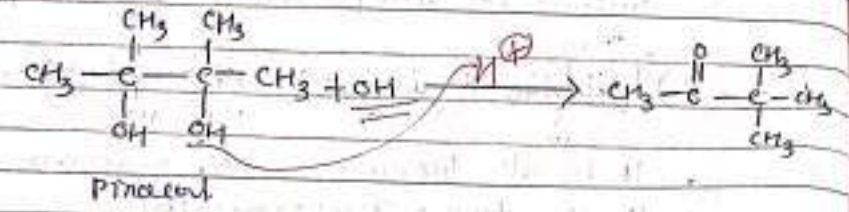


Carbocation — Tert. butyl alcohol

⊙ Energy profile diagram :-

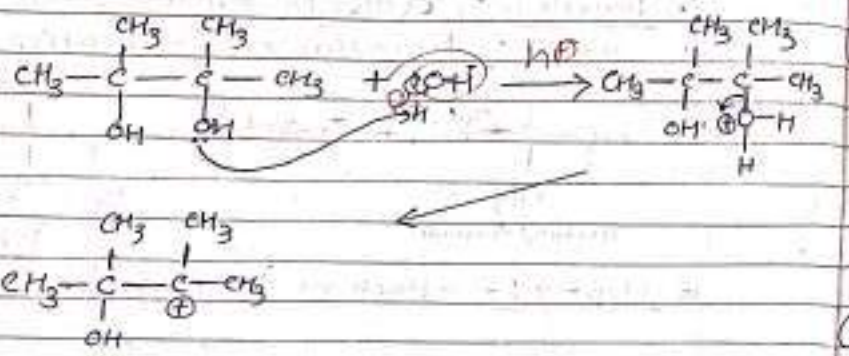


(Q.2 – B) Pinacol – Pinacolone rearrangement

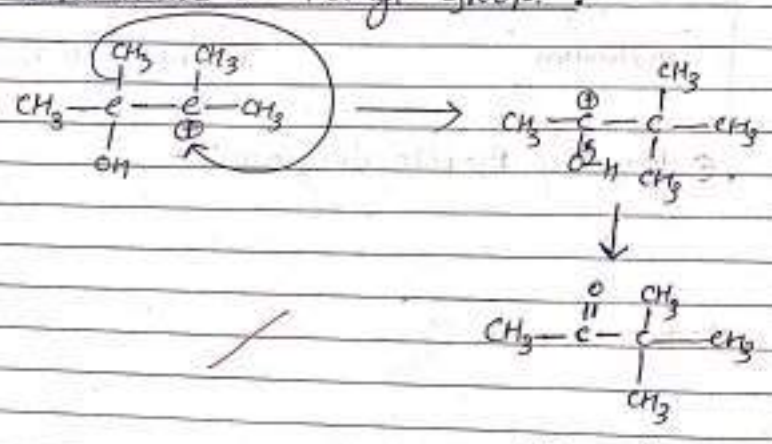


Pinacol

• Mechanism :- formation of Carbocation



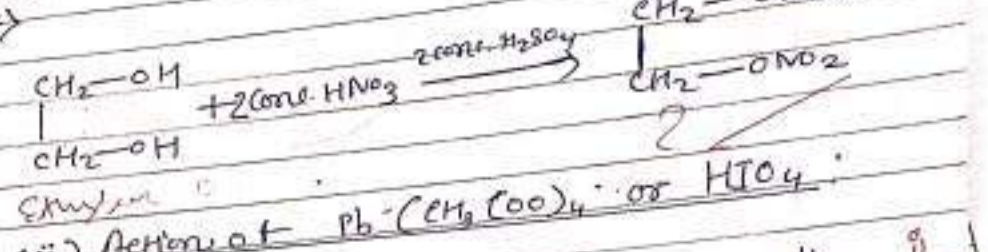
• Rearrangement of Methyl group :-



Pinacolone

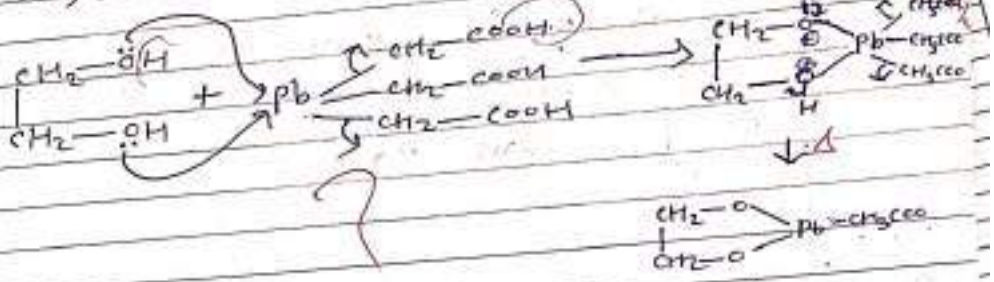
(Q.2 – B) (i) Action of conc. HNO_3 on ethylene glycol

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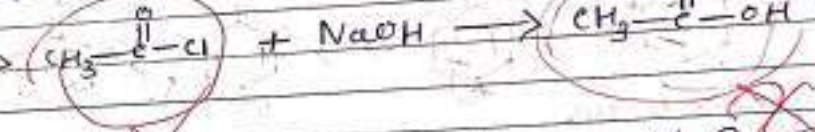


Ethylene

(ii) Action of $Pb(CH_3COO)_4$ or HIO_4 :



(Q.2 – B) (i) Acetaldehyde from acetyl chloride :

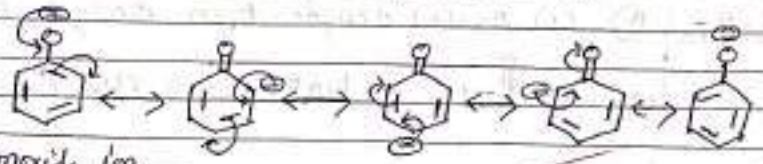
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(ii) Acetophenone from Benzonitrile ?

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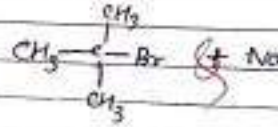
(Q.3 - A) Cannizzaro' reaction :-

(Q-5 - vi) resonance structure of phenoxide ion



Phenoxide ion

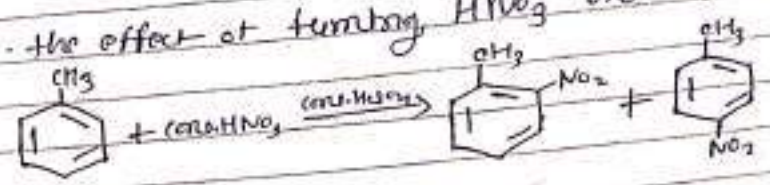
(Q-5 - iii) Substrate for SN1 reaction



(Q-5 - ii) O/P ratio :-

- When monosubstituted benzene.

(Q-5 - i) the effect of turning HNO_3 on Toluene

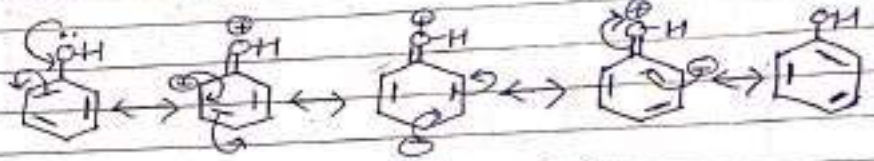


Toluene

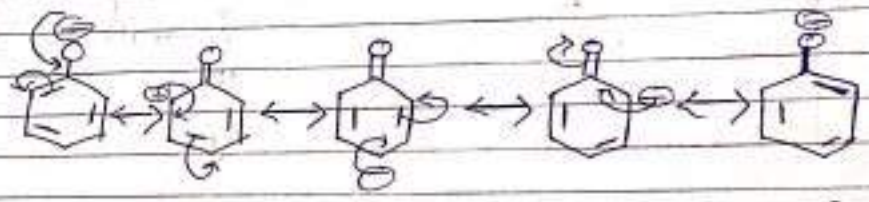
(Q-2 - E). Acidic Nature of Phenol on the basis of Resonance stabilization of Phenoxide ion.

- The donate of proton in molecules is called acidic Nature.
- The phenol having tendency to donate proton by forming phenoxide ion.

- Resonance of Phenol :-



- Resonance of phenoxide ion :



- The phenoxide ion has more stable than phenol because phenoxide ion resonating structure get negative charge on more electronegative oxygen atom.

Nabira Mahavidyalaya, Katol

Bachelor of Science (B.Sc.) Semester–III, Pre-Exam

CHEMISTRY (Organic Chemistry)

Paper-II

ATTENDANCE SHEET

Date-08/01/2024 Time-09:30 am to 12:30 pm

Sr. No.	Name of Student	Sign
1	Sameer S. Atram	Sameer S. Atram
2	Rajshree R. Rewatkar	Rewatkar
3	Tina S. Yelekar	Yelekar
4	Lakita U. Makde	Makde
5	Mitali M. Gajbhiye	Gajbhiye
6	Aparna G. Chinchmalatpure	Chinchpure
7	Vaishnavi L. Nibude	Vaishnavi
8	Ruchika P. Malvi	Pandvi
9	Hemlata R. Kale	H.P.Kale
10	Disha A. Giradkar	D.A.Giradkar
11	Purva S. Kharpkar.	

Head, Chemistry Deptt
Nabira Mahavidyalaya, Katol

GEOTAGGED PHOTOGRAPHS OF UNIT TEST:





Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-I (Paper-I)

Date: 28/10/2023

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	Arjun U. Pande	Arjun	31	H.A. Badad		61		
2	Sumit M. Dhame		32	D.D. Surjuse		62		
3	Ajesh S. Dongre		33	P. A. Chandele		63		
4	Sarang D. Rewatkar		34	S.O. Chandele		64		
5	Sarang D. Kakal		35	Y. D. Raut		65		
6	Bharat R. Rushiya		36	S.P. Narnaware		66		
7	Hujef R. Sheikh		37	S. R. Nimbarkar		67		
8	Nilay M. Bagde		38	S. S. Gajbe		68		
9	Mahendra R. Bakde		39	D.S. Dawara		69		
10	Shubham Meshram		40	S. A. Bidkar		70		
11	Mayur R. Wadbudhe		41	A. G. Dhote		71		
12	Rohani A. Rewatkar		42	V. H. Sahare		72		
13	Bhavana R. Wemulkar		43	K. A. Renghe		73		
14	Gunjan B. Bandu		44	G. V. Channe		74		
15	Gauri P. Bagade		45	D. R. Gaikwad		75		
16	Kajal R. Rajput		46	S. S. Akhare		76		
17	Ruchal Salam		47	V. H. Tobhare		77		
18	Pratiksha Dandale		48	K. R. Kadu		78		
19	Arpita A. Kadu		49	Samiksha S. Chaple		79		
20	Rani Kharpudya		50	Roshani Aaikey		80		
21	A. S. Kamde		51	Sakshi Chichmalkar		81		
22	Prapti Takale		52	Kautika A. Jungham		82		
23	Varsha V. Dongre		53	Dimpal V. Dongre		83		
24	Bhairavi M. Bankale		54	Bhagyashri Bhandale		84		
25	P. D. Rewatkar		55	Pochhi Pidduja		85		
26	P. K. Gaithe		56	Suhani R. Bakal		86		
27	T. A. Kharpude		57			87		
28	A. A. Banait		58			88		
29	P. S. Rewatkar		59			89		
30	G. M. Shembekar		60			90		

Name & Signature of Teacher: N. T. Katre

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-I (Paper-II)

Date:

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	P.S. Padiya	Padiya.	31	shreya akhare	shre	61		
2	S.R. Borkar	Borkar	32	Bhavika Bagde	Bagde	62		
3	B.D. Dhoodale	Dhoodale	33	Pradnya dhoke	Pradnya	63		
4	S.D. Rewatkar	SDRANM	34	Gauri Raut	Gauri	64		
5	A.D. Dongre	Dongre.	35	Sanskruti Ingle	S.S. Ingle	65		
6	M.R. Vaidya	M.R.Vaidya	36	Payal Chandne	Payal.	66		
7	N.M. Bagde	Bagde	37	Divyani Sutone	Sutone	67		
8	S.A. Bigkar	Bigkar	38	Devyani Dakare	Dakare	68		
9	A.G. Dhote	Akarsh.	39	Sn. R. Nimbarkar	Nimbarkar	69		
10	Y. D. Raut	Raut	40	Shubhangi Gedam	Gedam	70		
11	K.R. Kalaskar	Kalaskar	41	Achal A. Bamnote	Achal	71		
12	R.A. Rewatkar	Rewatkar	42	Tejaswini A.K	TKA	72		
13	G.O. Rewatkar	GRutkar	43	Bhairavi Mankar	Bhairavi	73		
14	S.H. Meshram	S.H.Meshram	44	Payal Rewatkar	P.S.Rewatkar	74		
15	M.R. Bhakte	MRBhakte	45	Pallavi K Gedam	Pallavi	75		
16	Sumit G. Dhame	Dhame	46	Sanjksha Shende	Shende	76		
17	Arjun pande		47	Sakshi Chidwalkar	Rewatkar	77		
18	Kalyani Kadu	Kadu	48	K.D. Jumghare	K.D.Jumghare	78		
19	Kalyani Renghe	Renghe	49	Rani Kharpuriya	Rani	79		
20	Bharat Ruthya	Ruthya	50	Divya Khase	DKhase	80		
21	Hrief Shaikh	Shaikh	51	Rutuja Raut	RRaut	81		
22	S.P. Parmawar	S.P.Parmawar	52	Kapila A. Kadu	Kadu	82		
23	Dimpal Dongre	Dongre	53	Hira P. Dewase	Dewase	83		
24	Bhavana Wasatkar	Bhavana	54	Sonali Bhagat		84		
25	S.S. Shaikame	S.Shaikame	55	Prathiksha Dandekar.		85		
26	Vaishnavi Sahare	Sahare	56	Hajra Parveen		86		
27	Gunjan Sambhakar	Gsambhakar	57			87		
28	Hemshwari Bodkhe	Bodkhe	58			88		
29	Sahani Khadatkar	Khadatkar	59			89		
30	Vaishnavi Tekam	Vaishnavi	60			90		

Name & Signature of Teacher: Mr. R.B. Chaware Rai Chaware

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-III (Paper-I)

Date:

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	Chitra Alekha		31	Oiya kumbhare		61		
2	Vikas. Basoi		32			62		
3	Pritam D. Jagole		33			63		
4	Ishant U. Ghagare		34			64		
5	Ekta. R. Barmase		35			65		
6	Vaishnavi A Parwade		36			66		
7	Tanushri Dhole		37			67		
8	Km. V. Panchbhai		38			68		
9	Prachal S. Bunait		39			69		
10	Sharwch. P.		40			70		
11	Om S. Gupta		41			71		
12	Ayan. J. Shaikh		42			72		
13	Vikki V. Dabre		43			73		
14	Leena R. Tiple		44			74		
15	Mayuri D. Kapse		45			75		
16	Vaishali. T. Dewase		46			76		
17	Minal. K. Dhande		47			77		
18	Semiksha D. Tarse		48			78		
19	Divya R. Bande		49			79		
20	Alfiya Pathan		50			80		
21	Vaibhavi S. Kadao		51			81		
22	Shreya M. Shedame		52			82		
23	Prachi R Telrandhe		53			83		
24	Divya Chapkar		54			84		
25	Dhanaki Sonkuwar		55			85		
26	Saraj Barmase		56			86		
27	Bhagyashri Ghore		57			87		
28	Shardha. Chandak		58			88		
29	Akanksha W. Sawai		59			89		
30	Nikita Chawhan		60			90		

Name & Signature of Teacher: Mr. R.B. Chavare

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-III (Paper-II)

Date: 28/10/2023

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	Abhay Chopde	A.D.Chopde	31	Divya. Kumbhare	divya.k	61		
2	Chinte Y. Yadav	Yadav	32	Dhanshri kalambe	D.G.Kalambe	62		
3	Tushar D. Waghmare	Waghmare	33	Vaibhavi S. Kadwane	Kadwane	63		
4	Pritam D Ingole	Ingole	34	Toshika K. Deshmukh	Deshmukh	64		
5	Ishant V. Gahagane	Gahagane	35	Divya S. Chafekar	Chafekar	65		
6	Ayan S. Shaikh	Shaikh	36	Dhanvi S. Sankpal	Dhanvi	66		
7	Lokesh G. Sawarkar	Lsawarkar	37	Khushi H Raut	K. Raut	67		
8	Lakshmikant S. Khandait	L.S.Khandait	38	Prachi R. Tekade	Tekade	68		
9	Yash R Jaiswal	Yjaiswal	39	Aliya A. Pathan	Athan	69		
10	Vikas. D Barai	Dbarai	40	Bhagyashree. G	Bhagyashree	70		
11	Kunal. G. G	Gonnal	41	Shreya M. Shelare	Shelare	71		
12	Jeyant S. M.	Jayant	42	Suraj M. Barmase	S.Barmase	72		
13	Sarvesh. G.	Sarvesh	43	Rutuli R. Borle	R. Borle	73		
14	Kushal N.	K.R.narsan	44	Manisha M. Aage	M.M.Aage	74		
15	Shamrich P.	Rupashan	45	Dakshika w. Sawai	Sawai	75		
16	Nayan S. Yelekar	S.Yelekar	46	Sharda O. Chandele	Chandele	76		
17	Mayuri O. Kapse	Kapse	47	vidya S. matoshe	Vidya	77		
18	Leena R. Tiple	Tiple	48	Anjali N. Wasnik	Anjali	78		
19	Minal. K. Dhande	Dhande	49			79		
20	Sakshi. O Dhore	S.Dhore	50			80		
21	Samiksha D. Tarare	Tarare	51			81		
22	Tanushri Dhole	T.D.Dhole	52			82		
23	Divya A. Gondee	Agondee	53			83		
24	Kuchita kalbande	K.J.Kalbande	54			84		
25	Anchal Bansod	Abansod	55			85		
26	Divyani Nimje	Dnimje	56			86		
27	Vaishnavi Pawade	Vpawade	57			87		
28	chaitalekhaguly	Chaduly	58			88		
29	Ekta Barmase	E.Barmase	59			89		
30	Nikita chauhan	Nchauhan	60			90		

Name & Signature of Teacher: N.T. Katre

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-V (Paper-I)

Date:

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	Ku. Anchal R. Clarke		31	Mr. Pranay P. Malvi		61		
2	Ku Anjali P. Sawarkar		32	Mr. Sahil H. Sheikh		62		
3	Ku Bhagyashri D. Raut		33	Mr. Satish S. Tayade		63		
4	Ku. Dipanjali M. Alone		34	Mr. Sumit K. Thakre		64		
5	Ku. Gayatri D. Dumadhar		35	Mr. Vishal S. Tonge		65		
6	Ku. Janvi M. Thakre		36			66		
7	Ku. Hina A. Dhamade		37			67		
8	Ku. Isha B. Kasare		38			68		
9	Ku. Kanchan R. Gured		39			69		
10	Ku. Kabina N. Dhobale		40			70		
11	Ku. Neha H. Sabale		41			71		
12	Ku. Neha S. Kakde		42			72		
13	Ku. Pranjali D. Rewatkar		43			73		
14	Ku. Pragati G. Munne		44			74		
15	Ku. Ruchika R. Bhaume		45			75		
16	Ku. Ritu E. Yewatkar		46			76		
17	Ku. Riba E. Baig		47			77		
18	Ku. Sonali Pandey		48			78		
19	Ku. Sayama R. Sheikh		49			79		
20	Ku. Sneha S. Dhote		50			80		
21	Ku. Vrunda S. Hajare		51			81		
22	Mr. Aditya D. Anganwar		52			82		
23	Mr. Ankesh P. Kumariya		53			83		
24	Mr. Ankush A. Bhange		54			84		
25	Mr. Geetkumar A. Bhagat		55			85		
26	Mr. Jay P. Kumariya		56			86		
27	Mr. Mayur K. Shende		57			87		
28	Mr. Mohnish G. Dharme		58			88		
29	Mr. Nayan K. Sambhare		59			89		
30	Mr. Pawan V. Junghare	Junghare	60			90		

Name & Signature of Teacher: Mr. N. T. Katre

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Test Examination (2023-24)

B. Sc. Semester-V (Paper-II)

Date: 30/10/2023

Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature	Sr. No.	Name of Students	Signature
1	Pawan Jughav		31			61		
2	Sumit Thakre		32			62		
3	Harshal Deshmukh		33			63		
4	Aditya Ambatkar		34			64		
5	Pradeep Malvi		35			65		
6	G. A. Bhasme		36			66		
7	Satish S. Tayade		37			67		
8	J. P. Kumarjiya		38			68		
9	S. h. Shaikh		39			69		
10	A. Ankush Thange		40			70		
11	R. E. Yenkar		41			71		
12	Kanchan R. Gurnu		42			72		
13	Mayuri Junata		43			73		
14	Sneha Dhote		44			74		
15	Sonali Pardeshi		45			75		
16	Aachal Chorde		46			76		
17	Gayatri Dameshwar		47			77		
18	Ranjali Rewatkar		48			78		
19	Janvi Thakre		49			79		
20	Sayema Shaikh		50			80		
21	Isha O. Kasare		51			81		
22	Dipanjali M. Alone		52			82		
23	Bhagyashri D. Raut		53			83		
24	Neha Kakde		54			84		
25	Pragati Munne		55			85		
26	Manish Shende		56			86		
27	Yogesh Mahalle		57			87		
28	Anikesh Kumeriya		58			88		
29	Mohnish Dhoke		59			89		
30			60			90		

Name & Signature of Teacher: Mr. N. T. Katre

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Session (2023-24)
B. Sc. Semester -II (Mathematics-I)
Test Examination Attendance

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Sahani S. Barkar	Barkar	38		
2	prachi S padaliy	Padaliy	39		
3	Dayani S. Dawale	S.S. Dawale	40		
4	Bhagyashri Khandale	Khandale	41		
5	Nilesh S. Dongre.	Nilesh.	42		
6	Sarang D. Rewatkar	Sarang.	43		
7	Gaurav R. Rushiya	Rushiya	44		
8	Hujef R. Sheikh	Sheikh	45		
9	Shubham M. Meshram	S.M. Meshram	46		
10	Mahendra R. Bhakte	M.R.Bhakte	47		
11	Gauri P. Bagde	Gauri.	48		
12	Gunjan H. Shembekar	Gunjan	49		
13	Sakshi P. Narnaware	Sakshi	50		
14	Vaishnavi H. Sahare	Sahare	51		
15	Bhavana R. Wewulkar	Bhavana.	52		
16	Akanksha Dhote	Akanksha.	53		
17	Sayali Shrirame	Shrirame	54		
18	Gunjan D. Rewatkar	G.Rewatkar	55		
19	Rohani A. Rewatkar	R.Rewatkar	56		
20	Ruchali D. Salam	R.Salam	57		
21	Pratiksha P. Dandhe	P.dandhe	58		
22	Achal A. Bansod	A.Bansod	59		
23	Divyani D. Sursuse	Sursuse.	60		
24	Payal A. chandele	Payal	61		
25	Payal S. Rewatkar	P.S.Rewatkar	62		
26	Gauri P. Saud	Gauri.	63		
27	Kalyani R. Kadao	K.Kadao	64		
28	Kalyani A. Rengte	K.A.Rengte	65		
29	Vaishnavi H. Tabhane	V.H.T.	66		
30	Sumit. G. Dhenge	S.Dhenge	67		
31	Arjun v pande	A	68		
32	Sanskruti S. Gajbe	S.S Gajbe	69		
33			70		
34			71		
35			72		
36			73		
37			74		

Name & Signature of Teacher: R. B. Chaware

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Test Examination
B.Sc. Sem-II Maths-II

2ND SEM

Score	Full Name
1 / 10	Achal Anil Banait
4 / 10	Akanksha Dhote
3 / 10	Alpesh Dongre
7 / 10	Arjun pande
5 / 10	Bhagyashri Dilip Dhandale
2 / 10	Bhavana werulkar
6 / 10	Devyani Suresh daware
4 / 10	Dimpal Dongre
5 / 10	Divyani Dhanraj Surjuse
2 / 10	Gauri purushottam bagde
4 / 10	Gunjan Dinesh Rewatkar
9 / 10	Gunjan shembekar
5 / 10	Hira Prabhakar Dewase
4 / 10	Hujef sheikh
7 / 10	Kalyani Arvind Renghe
5 / 10	Mahendra Rajendraji Bhakte
2 / 10	Mayur Rajendra Wadbudhe
3 / 10	Pallavi Khemraj Gathe
3 / 10	Payal Sheshraoji Rewatkar
7 / 10	Prachi sandesh padoliya
2 / 10	Pragati D Rewatkar
5 / 10	Pratiksha purushottam Dandhare
1 / 10	Rani kharpuriya
3 / 10	Rohani Arjun Rewatkar
5 / 10	Ruchal Devendra Salam
1 / 10	Rutuja Ajay raut
4 / 10	Sakshi narnaware
3 / 10	Samiksha Shankar chaple
2 / 10	Sanika Ashish Bidkar
5 / 10	Sarang rewatkar
~~2 / 10~~	~~Sayali Sunil shrirame~~
5 / 10	Sayali Sunil shrirame
~~0 / 10~~	~~Shreya akhare~~
3 / 10	Shreya akhare

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5 / 10 Shubham Harishchandra Meshram ✓

6 / 10 Shubhangi omprakash chandele ✓

8 / 10 Suhani Ravichandra Borkar ✓

6 / 10 Vaishnavi hirachandra Sahare ✓

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Session (2023-24)
B. Sc. Semester -IV (Mathematics-I) Topic: Real No. System
Test Examination Attendance

Date: 26/04/2024

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Divyani R. Nimje	Nimje	32		
2	Samiksha D. Tarase	Tarase	33		
3	Divya R. Kumbhare	Divya	34		
4	Divya R. Bandre	Bandre	35		
5	Shreya M. Shedame	Shedame	36		
6	Vaishnavi A Pawade	Pawade	37		
7	Tanushri Dhote	T. D. Dhote	38		
8	Manisha M. Aage	M M Aage	39		
9	Dharavi S. Somkuwar		40		
10	Prachi R. Telrade	Telrade	41		
11	Divya S. Chaptekar		42		
12	Leena R. Tiple	Tiple	43		
13	Chitralekha V. Ghadge	Ghadge	44		
14	Bhagyashri D. Ghonse		45		
15	Anjali N. Waikhed	Anjali	46		
16	Vaishali T. Devase		47		
17	Sarvesh M. Gedekar		48		
18	Atharv D. Chapade		49		
19	Ishant V. Ghagare		50		
20	Ayan S. Sheikh.	Sheikh.	51		
21	Chintu Y. Rajurkar		52		
22	Lukesh G. Sawarkar		53		
23	Kushal R. Nasare	K. R. Nasare	54		
24	Aditya H. Pathade	A. H. Pathade	55		
25	Yash R. Junghare		56		
26	Lakshmikant S. Khandait	L. S. Khandait	57		
27	Vikki V. Gabre		58		
28	Om. S. Gupta		59		
29	Mayuri D. Kapase		60		
30			61		
31			62		

Name & Signature of Teacher: N. T. Katre

26/04/2024

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Session (2023-24)

B. Sc. Semester -IV (Mathematics-II)

Test Examination Attendance

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Kushal R. Nasare	K.R.nasare	38		
2	Vikas. D. Barai	Barai	39		
3	Yash. L. Junghare	Yashil	40		
4	Lukesh G. Sawarkar	Lsawarkar	41		
5	K. A. Gaurande	Kimtag	42		
6	P. D. Ingole	Pingole	43		
7	Ishant .U. Ghagare	Ighagare	44		
8	Rupali R. Gorle	Rgorle	45		
9	Dharavi S. Sonkuwar	Dsonkuwar	46		
10	Ekta . R. Baramase	Baramase	47		
11	Tanushri Dhote	T. D. Dhote	48		
12	Vaishnavi A Tekade	Vaishnavi	49		
13	Anjali N Gaikwad	Anjali	50		
14	Divya S. Chafekar	Chafekar	51		
15	Mayuri D. Kapase	Kapase	52		
16	Prachi B Tekade	PTekade	53		
17	Bhagyashri D Ghorse		54		
18	Chitralekha V. Ghadge	Ghadge	55		
19	Abhay .D Chopade	A.D.Chopade	56		
20	Chinmay Y. Hajare		57		
21	Sharukh Pathan	Pathan	58		
22	Aditya . H. Pathade	A.H.Pathade	59		
23	Minal K. Dhamde		60		
24	Leena R. Tiple	Tiple	61		
25	Himanshu Narnaware		62		
26	Sakshi Dhopte		63		
27	Shreya Shedame	Shedame	64		
28			65		
29			66		
30			67		
31			68		
32			69		
33			70		
34			71		
35			72		
36			73		
37			74		

Name & Signature of Teacher: R. B. Chaware

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Session (2023-24)
B. Sc. Semester -VI (Mathematics-I)
Test Examination Attendance

Topic: Vector spaces
Date: 25/04/2024

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar	Adityad.	31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	Pkumeriya
3	Ankush A. Bhange	Abhange	33	Kanchan R. Gurao	K. R. Gurao
4	Bhagyshri D. Raut	B.Raut.	34	Karina N. Dhobale	
5	Dipanjali M.r Alone	DAlone	35	Manish K. Shende	Mshende
6	Geetkumar Bhasme	GBhasme	36	Mayuri A. Junankar	M. Junankar
7	Harshal A. Deshmukh	HDeshmukh	37	Mohnish G. Dharme	M.G. Dharme
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare	I. B. kasare	39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare	Nksh	42	Ritu E. Yenorkar	RY
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde	NSkakde	44	Sahil H. Sheikh	S. Sheikh
15	Pawan V. Junghare	PJunghare	45	Sakshi S. Kumeriya	
16	Pragati G. Munne	PGMunne	46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	Staywade
18	Pranjali D. Rewatkar	Rawatkar	48	Sayama R. Sheikh	Sheikh.
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	
21	Rohit R. Jaiswal		51	Sonali M. Pandey	Spandey.
22	Sumit K.Thakre	Sthakre	52	Yogesh B. Mahalle	YBMalle.
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde	Acharde	55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar	Ydamedhar	60		

Name & Signature of Teacher: N.T. Katre

25/04/2024

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Session (2023-24)
B. Sc. Semester -VI (Mathematics-II)
Test Examination Attendance

Date: 16/04/2024

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar		31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M.r Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare		39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne		46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	S.S.Dhote
21	Rohit R. Jaiswal		51	Sonali M. Pandey	
22	Sumit K.Thakre		52	Yogesh B. Mahalle	
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teacher:

(N. T. Kathe)

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NABIRA MAHAVIDYALAYA, KATOL

Dept. of Mathematics

Test Examination : 2023–24

B.Sc. Sem–1 / Maths–1 / Unit–1

Date: 28/10/2023

M. M. : 10

Attempt Any Three :

① State and Prove De Moivre's theorem for any integer n. (4M)

② Prove That :

$$(a+ib)^{m/n} + (a-ib)^{m/n} = 2(a^2+b^2)^{m/2n} \cos\left(\frac{m}{n}\tan^{-1}\frac{b}{a}\right)$$

(3M)

③ Prove that :

$$\left[\frac{1+\sin\theta+i\cos\theta}{1+\sin\theta-i\cos\theta}\right]^n = \cos\left(\frac{n\pi}{2}-n\theta\right)+i\sin\left(\frac{n\pi}{2}-n\theta\right)$$

(3M)

④ Solve the equation $z^5+32=0$. (3M)

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Date / /

NABIRA MAHAVIDYALAYA, KATOL

Dept. of Mathematics

Test Examination: 2023-24

B.Sc. Sem-3 / Maths-2 / Unit-1

Date: 28/10/2023

(1) Define the following:

(i) group (ii) cyclic group

(iii) Order of an element of a group.

(3M)

(2) If $S = \{0, 2, 4\}$, then show that $(S, +_6)$ is a subgroup of the group $(I_6, +_6)$.

(3M)

(3) If G is a group, then prove that

(i) $(a^{-1})^{-1} = a$, $\forall a \in G$

(ii) $(ab)^{-1} = b^{-1}a^{-1}$, $\forall a, b \in G$.

(4M)

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

Test Examination: 2023-24

B.Sc. Sem-5 / Maths-1 / Unit-1

M.M. 10

Q.1: Attempt Any Two (8 M)

(A) Show that the function $f(z)$ is constant if it is analytic with constant modulus.

(B) Show that $f(z) = \bar{z}$ is continuous at $z = z_0$ but not analytic at $z = z_0$.

(C) If $f(z) = u + iv$ is analytic function of z, then prove that $\left(\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2}\right)|f(z)|^2 = 4|f'(z)|^2$.

Q.2: Attempt Any One (2M)

(a) Find the derivative of $f(z) = z^3$ by using first principle.

(b) For what values of z, the function $w = z^{1/3}$ ceases to be analytic?

——×——

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

Test Examination : 2023-24

B.Sc. Sem-5 / Math-2 / Unit-3

Date: 30/10/2023

Max. Marks : 10

Attempt Any Two :

(1) If $a \leq b$ ~~& $a \leq a$~~ then prove that $a * b = a$ and conversely. (3M)

(2) If $b \leq c$ then prove that $a * b \leq a * c$ and $a \oplus b \leq a \oplus c$ (4M)

(3) Prove that $(a * b)' = a' \oplus b'$ (3M)

—x—x—

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

Test Examination: 2023-24

B.Sc. Sem-II / Maths-2 / Unit-1

Max. Marks: 10

Date: 27/04/2024

Attempt Any Two:

(1) A particle moves along the curve $x = a\cos t$, $y = a\sin t$, $z = at\tan\alpha$. Determine the velocity and accelⁿ at any time t and their magnitude at $t = 0$.

(2) Find the direⁿal desivative of $xy^2 + yz^3$ at the point $(2, -1, 1)$ along the tangent to the curve $x = at\sin t$, $y = a\cos t$, $z = at$ at $t = \pi/4$.

(3) (i) If $\bar{r} = x\hat{i} + y\hat{j} + z\hat{k}$ and $r = |\bar{r}|$, find $\operatorname{div}(\bar{r}/r^2)$.

(ii) Determine whether the vector $\bar{v} = yz\hat{i} + xz\hat{j} + xy\hat{k}$ is irrotational?

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

Test Examination; 2023-24

B.Sc. Sem-IV / Maths-1 / Unit-1

Max. Marks: 10

Date: 27/04/2024

Que 1: Attempty Any Two (6 marks)

(A) Prove that $\sup(X+Y) = \sup X + \sup Y$, if X, Y are non-empty bdd subsets of R.

(B) State and Prove the Archimedean property.

(C) Prove that the union of an arb. Collection of open sets is open.

Que 2: Attempty Any Two (4 marks)

(a) Define interior point and limit point of a set, open set and closed set.

(b) For any set X, prove that $X^{oo} = X^{o}$.

(c) Prove that $|x| = 0$ iff $x = 0$. Hence prove $|x-y| = 0$ iff $x = y$ for $x, y \in R$.

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DATE: / /

B.Sc. Sem-6 : 2023-24

Unit Test :

Maths-2 (Sp. Th. of Relativity) : Unit-1

(1) (A) Prove that $\nabla^2 - \frac{1}{c^2}\frac{\partial^2}{\partial t^2}$ is invariant under special Lorentz transformation. (5M)

OR

(1) (B) Derive general and simple Galilean transformations considering two inertial frames S & S'. Also obtain their inverse transformations. (5M)

(2) Solve any Two (5M)

(a) State the fundamental postulates of special relativity.

(b) Show that the circle $x'^2 + y'^2 = a^2$ in S' is measured to be an ellipse in S if S' moves with uniform velocity relative to S.

(c) ~~DISCUSS~~ Show that $(ds)^2 = (dx)^2 + (dy)^2 + (dz)^2 - (cdt)^2$ is Lorentz invariant.

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Nabira Mahavidyalaya, Katol

Test Examination

Dept. of Mathematics

B.Sc. Sem-VI: Maths-1/Unit-1

Time: 45 minutes M.M.: 10

(1) Attempt Any two: (8 marks)

(A) If S is a nonempty subset of a vector space V, then prove that L(S) is a subspace of V.

(B) Let U & W are subspaces of a vector space V. Prove that U∪W is a subspace of V if U⊂W or W⊂U.

(C) In a vector space V over a field F, prove that

(i) $\alpha \cdot 0 = 0 \quad \forall \alpha \in F, 0 \in V$

(ii) $0 \cdot u = 0, \forall u \in V$

(2) Attempt Any two: (2 marks)

(a) Define vector space and subspace.

(b) Define L.I. vectors and linear span of a set.

~~(c) If a nonempty subset S of a vector spa~~

(c) If S is a subspace of a v.sp. V, then prove that $u+v, \alpha u \in S \quad \forall u, v \in S$ & $\alpha \in F$.

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-II (2023-24) N.E.P

Unit Test-2 Attendance record.

09/05/24

S.N	Name of Students	P-1 RA	P-2 ANM	P-3 DG	P-4 OR
1	Bhagyashri Raut	Bhagyashri	Bhagyashri	Bhagyashri	Bhagyashri
2	Latika Bhange	Bhange	Bhange	Bhange	Bhange
3	Urmila Choudhari	Choudhary	Choudhary	Choudhary	Choudhary
4	Divya Musale	Musale	Musale	Musale	Musale

HOD, Maths

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-II(2023-24)

Unit Test-1 Attendance record.

S.N	Name of Students	P-1 RA	P-2 ANM	P-3 DG	P-4 OR
1	Bhagyashri Raut	Bhagyashri Raut	Bhagyashri Raut	Bhagyashri Raut	Bhagyashri Raut
2	Latika Bhange	Bhange.	Bhange.	Bhange.	Bhange.
3	Urmila Choudhari	U. Choudhari	U. Choudhari	U. Choudhari	U. Choudhari
4	Divya D Musale	Dmusale	Dmusale	Dmusale	Dmusale.

Co-ordinator, Maths

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Nabira Mahavidyalaya Katol

Department of Mathematics

M.Sc Sem-IV (2023-24)

Unit Test-3, Attendance Record

S.N	Name of Students	P-1 DS	P-2 P.D.E	P-3 A.N.M	P-4 COSMO	P-5 OR-II
1	Chaitali Sawarkar					
2	Himani Gawande					
3	Kishor Dhok					
4	Nilesh Ukey					

co-ordinator, dept of maths

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-IV (2023-24)

Unit Test-2 Attendance record

S.N	Name of Students	P-1 DS	P-2 P.D.E	P-3 ANM	P-4 COSMO	P-5 OR-II
1	Chaitali Sawarkar					
2	Himani Gawande					
3	Nilesh Ukey					
4	Kishor Dhok					

co-ordinator, dept of Maths

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-IV (2023-24)

Unit Test-1 Attendance record

S.N	Name of Students	P-1 DS	P-2 P.D.E	P-3 ANM	P-4 COSMO	P-5 OR-II
1	Chaitali Sawarkar					
2	Himani Gawande					
3	Nilesh Ukey					
4	Kishor Dhok					

Co-ordinator,
Dept of Maths

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Nabira Mahavidyalaya Katol

Department of Mathematics

M.Sc Sem-I (2023-24) N.E.P

Unit Test-II Attendance Record

S. N	Name of Students	P-1 ALG	P-2 TOP	P-3 ODE	P-4 IE	P-5 RM
1	Bhagyashri Raut	Raut	Raut	Raut	Raut	Raut
2	Latika Bhange	Bhange	Bhange	Bhange	Bhange	Bhange
3	Urmila Choudhari	Choudhari	Choudhari	Choudhari	Choudhari	Choudhari
4	Divya Musale	Musale	Musale	Musale	Musale	Musale

Co-ordinator,
dept of Maths

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Nabira Mahavidyalaya Katol

Department of Mathematics

M.Sc Sem-I (2023-24) N.E.P

Unit Test-I Attendance Record

S.N	Name of Students	P-1 ALG	P-2 TOP	P-3 ODE	P-4 IE	P-5 RM
1	Bhagyashri Raut	Present	Present	Present	Present	Present
2	Latika Bhange	L.V. Bhange	L.V. Bhange	L.V. Bhange	L.V. Bhange	L.V. Bhange
3	Urmila Choudhari	Choudhary	Choudhary	Choudhary	Choudhary	Choudhary
4	Divya Musale	Dmusale	Dmusale	Dmusale	Dmusale	Dmusale

co-ordinator,
dept of Maths.

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-III (2023-24)

Unit Test-III Attendance record

S.N	Name of Students	P-1 CA	P-2 FA	P-3 MM	P-4 GR	P-5 OR-I
1	Chaitali Sawarkar	Sawarkar	Sawarkar	Sawarkar	Sawarkar	Sawarkar
2	Himani Gawande	Gawande	Gawande	Gawande	Gawande	Gawande
3	Nilesh Ukey	Ukey	Ukey	Ukey	Ukey	Ukey
4	Kishor Dhok	Dhok				

Co-ordinator,
dept of Maths.

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NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-III (2023-24)

Unit Test-1 Attendance record

S.N	Name of Students	P-1 CA	P-2 FA	P-3 MM	P-4 GR	P-5 OR-I
1	Chaitali Sawarkar					
2	Himani Gawande					
3	Nilesh Ukey					
4	Kishor Dhok					

co-ordinatn, Maths

NABIRA MAHAVIDYALAYA, KATOL

Department of Mathematics

M.Sc Sem-III (2023-24)

Unit Test-2 Attendance record

S.N	Name of Students	P-1 CA	P-2 FA	P-3 MM	P-4 GR	P-5 OR-I
1	Chaitali Sawarkar					
2	Himani Gawande					
3	Nilesh Ukey					
4	Kishor Dhok					

co-ordinatn, Maths

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Nabiea Mahavidyalaya Kaithal.
Department of Mathematics
M.Sc Sem-4 (P.D.E)
paper-2 (2023-24).
Unit test - III

Duration: 1 Hr Max marks: 25

Q.1 (Solve any two questions)

A) Solve $u_t = u_{xx}$, $-\infty < x < \infty$, $t > 0$
$u(x,0) = f(x)$, $-\infty < x < \infty$
where $f(x) = \begin{cases} 0, & x < 0 \\ q, & x > 0 \end{cases}$

B) Solve $u_t = u_{xx}$, $0 < x < l$, $t > 0$
$u(0,t) = u(l,t) = 0$
$u(x,0) = x(1-x)$, $0 \le x \le l$

C) Solve the Boundary Value problem $\frac{\partial u}{\partial x} = 4\left(\frac{\partial u}{\partial y}\right)$ if $u(0,y) = 8e^{-3y}$

Q.2) Compulsory

A) Solve by method of Separation of Variables
$\frac{\partial^2 z}{\partial x^2} - \frac{2\partial z}{\partial x} + \frac{\partial z}{\partial y} = 0$.

Nabira Mahavidyalaya Katol.
Department of mathematics
M.Sc sem-4 (2023-24)
Paper - 8 (Cosmology).
Unit test - I st

Duration: 1Hr Max marks : 25

Q.1 (Solve any two questions)

A) obtained the Einstein model of Universe

B) P.T the Einstein model is an isotropic form

$$ds^2 = \frac{-1}{\left(1+\frac{\rho^2}{4R^2}\right)^2}\left[d\rho^2 + \rho^2 d\theta^2 + \rho^2 \sin^2\theta\, d\varphi^2\right] + dt^2$$

C) obtain the motion of the test particle in Desitter Universe.

Q.2) Solve the any one question.

A) Consider the transformation $r = R\sin\psi$.

B) Discuss in Brief the pressure and density in Einstein Universe.

Nabiea Mahavidyalaya Katol
Department of Mathematics N.E.P.
M.Sc. Sem - 2 (Differential Geometry).
paper - 3 (2023-24)
Unit test - IInd

Duration : 1 Hr Max marks : 25.

Q.1 (Solve Any two questions).

A) The canonical geodesic equation can be written as
$E u'' + F v'' + \frac{1}{2} E_1 u'^2 + E_2 u'v' + (F_2 - \frac{1}{2} G_1) v'^2 = 0$

B) P.T the geodesic equation on a Right circular cone $x = u\cos v$, $y = u\sin v$, and $z = u\cot\alpha$. are given by $u = h\sec(v\sin\alpha + \beta)$.

C) Show that the geodesic on Anchor Ring. $x = (b + a\cos u)\cos v$, $y = (b + a\cos u)\sin v$, $z = a\sin u$, $0 \le u, v \le 2\pi$ are given by $dv = \frac{c\,a\,d\xi}{\xi\sqrt{a^2(\xi - b)^2}\sqrt{\xi^2 - c^2}}$ where $\xi = b + a\cos u$ & c is constant.

Q 2) (Solve any one question)

A) In the geodesic polar form prove that the Gaussian Curvature $K = -\frac{g_{11}}{g}$ where $g = \sqrt{G}$

B) Define christoffel symbol of I^st and II^nd kind

Nabira Mahavidyalaya Kaba
Department of Mathematics
M.Sc Sem-I (2023-24)
Paper - Integral equation

Duration: 1Hr Unit test - I Maxmarks: 12

Q.1) Solve Any two questions.

A) Form an Integral equation corresponding to differential equation.

$y'' + 2xy' + y = 0$ with $y(0) = 1$ & $y'(0) = 0$

B) Find the Resolvent kernel

$K(x,y) = e^{k(x-y)}$ for $a = 0$ & $b = 1$

and $R(x,y;\lambda) = -\sum_{n=1}^{\infty} \lambda^{n-1} K_n(x,y)$

C) Form an Integral equation corresponding to the differential equation.

$$\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = 0$$

with initial condition $y(0) = 0$ & $y'(0) = -1$

Q.2) Solve any one question.

A) Show that the function $y(x) = e^x(2x - \frac{2}{3})$ is a solution of fredholm Integral equation

$y(x) + 2\int_0^1 e^{x-t}\, y(t)\, dt = 2xe^x$.

B) define Iterated Kernel & Hermitian Kernel.

Nabira Mahavidyalaya Kaloli
Department of Mathematics
M.Sc Sem-III (2023-24)
Paper- Mathematical Methods
Unit test - I

Time: 1 Hr Max marks : 12

Q.1 Solve any two questions.

A) Show that $F_s\left[\frac{e^{qt}}{t}; \xi\right] = \sqrt{\frac{2}{\pi}} \tan^{-1}\left(\frac{\xi}{q}\right)$

B) If $F(\xi) = F_c\left[e^{-t^2/2}; \xi\right]$ then show that $\frac{dF}{d\xi} = -\xi F$, $F(0) = 1$ and Hence deduced that $F(\xi) = e^{-\xi^2/2}$

C) The fourier transform of convolution of f and g is the product of fourier transform of $F(\xi)$ and $G(\xi)$.
$F[f.g; \xi] = F(\xi).G(\xi)$.

Q.2) Solve any one question.

A) Find the finite Sine transform of $f(x)$ if $f(x) = x(a-x)$

B) P.T $F_S^{-1}[n^{-1}; x] = \frac{\pi}{a}(1 - x/a)$.

Nabira Mahavidyalaya Katol
Department of Mathematics
M.Sc - Sem-4 (2023-24)
Paper - 1 D.S.
Unit Test - 2nd

Duration :- 1 Hr. Maximum Marks 25

Q.1] solve any two question of the followings

A] Let S be a local section at o and suppose $\phi_{t_0}(z_0) = 0$, then show that given a nbd of t_0, there is an open set $U \subset W$ containing z_0 and unique c' map $\tau : U \to R$ such that $\tau(z_0) = t_0$ and $\phi_{\tau(x)}(x) \in S$, $\forall\ x \in U$.

B] Let $y \in [L_\omega(x) \cup L_\alpha(x)]$. Then show that the trajectory of y crosses any local section atmost more than one point.

c] state and prove Poincare Bendixon Theorem.

Q. 2] solve any one of the following.

A] Prove that every trajectory of voltera Lotka equation is closed orbit except the equilibrium and coordinate axes.

B] Define a monotone sequence along a trajectory.

Nabira Mahavidyalaya katol
Department of Mathematics
M.Sc. sem-4 (2023-24)
Paper-1 D.S

Duration: 1 Hr. Unit test-3rd max. marks 25

Q1] solve any two question of the followings.

A] State and prove Liapunov's stability theorem.

B] Discuss the behaviour of the equilibrium point of the non-linear system $x' = f(x)$.

$$\begin{bmatrix} x_1 - x_1x_2 \\ x_2 - x_1^2 \end{bmatrix}$$

C] Discuss the motion of a pendulum moving in a vertical plane as an example of a non-linear sink.

Q2] solve any one question of the followings.

A] Define the following terms.
i] Stable equilibrium
ii] Asymptotically stabe equilibrium
iii] Unstable equilibrium.

B] Show that the α-limit set and ω-limit set of any trajectory are closed invarient.

Nabira Mahavidyalaya Katol
Department of Mathematics
M.Sc. sem-2 (2023-24)
Unit test-2 (F.A)

Duration: 1 Hrs. max. marks - 25

Q1] solve any two questions of the following

A] Suppose f maps a convex set $E \subset R^n$ into R^m, f is differentiable in E and there is a real no. M such that $\|f'(x)\| \leq M$ for every $x \in E$
Then prove that $|f(b)-f(a)| \leq M|b-a|$ $\forall$ $a, b \in E$

B] if X is a complete metric space if ϕ is contraction of X into X then $\exists$ one and only one $x \in X$ such that $\phi(x) = x$

C] let Ω be the set of all invertible operators on R^n
i) if $A \in \Omega$, $B \in L(R^n)$ and if $\|B-A\| \cdot \|A^{-1}\| < 1$ then $B \in \Omega$

Q2] solve any one questions of the following

A] Prove that a linear operators A on a finite dimensional vector space X is one to one if range of A is all of X.

B) let E be an open subset in R^n and f maps from E into R^m and $x \in E$ also

$$\lim_{h \to 0} \frac{|f(x+h) - f(x) - A(h)|}{|h|} = 0$$

with $A = A_1$ & $A = A_2$ then $A_1 = A_2$

Nabira Mahavidyalaya Katol
Department of Mathematics
M.Sc. sem-III 2023-24
Paper-2 Functional Analysis

Time 1 hrs. Unit test II max. marks 25

Q1 Solve any two questions.

a) If Y is a Banach space then B(X, Y) is a Banach space.

b) The dual space X' of a normed space X is always a Banach space whether or not X

c) let X be an inner product space and let Y be non-empty complete subspace of X then for any $x \in X$ ∃ an element $z = (x - y)$ $y \in Y$ which is orthogonal to Y.

Q.2 Solve any one

a) let (f_1, f_2, f_3) be a dual basis of a basis (e_1, e_2, e_3) of R^3 where $e_1 = (1,1,1)$ $e_2 = (1,1,-1)$ $e_3 = (1,-1,-1)$ find $f_1(x)$ $f_2(x), f_3(x)$ at a point $x = (1,0,0) \in R^3$

b) In l^p-space, $p \neq 2$ is not an inner product space.

Nabira Mahavidyalaya, Kedal.

Subject - Algebra-I

Unit Test 1 (2023-24) max.mark 25

Time : 1 hrs. M.Sc - Sem-I (maths)

Name of student :

Q.1 solve any two of the followings.

a) state and prove Gauss lemma.

b) define PID, The principle ideal generated by any two element of an integral domain are equal iff these element are associates.

c) Every PID is a UFD but a UFD is not neccessary a PID.

Q.2 solve any one of the followings.

a) An irreducible element of a Commutative principle ideal domain is always prime.

b) Every field is an integral domain and also A finite integral domain is a field.

c) an integral domain with unity every element is irreducible.

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -II (2023- 24)N.E.P

Unit Test-III (Online)

Sr no	DATE	TIME	SUBJECT
1	19/05/2024	11:00-12:00 pm	Real Analysis
2	20/05/2024	11:00-12:00 pm	A.N.M
3	21/05/2024	11:00-12:00 pm	Differential Geometry
4	22/05/2024	11:00-12:00 pm	Operations Research

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -II (2023- 24)N.E.P

Unit Test-II

Sr no	DATE	TIME	SUBJECT
1	09/05/2024	11:00-12:00 pm	Differential Geometry
2	13/05/2024	11:00-12:00 pm	A.N.M
3	11/05/2024	11:00-12:00 pm	Real Analysis
4	15/05/2024	11:00-12:00 pm	Operations Research

HOD, Maths

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Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -IV (2023- 24)

Unit Test-II

Sr no	DATE	TIME	SUBJECT
1	02/04/2024	11:30-12:30 pm	Dynamical system
2	03/04/2024	11:30-12:30 pm	P.D.E.
3	04/04/2024	11:30-12:30 pm	A.N.M
4	05/04/2024	11:30-12:30 pm	Cosmology
5	06/04/2024	11:30-12:30 pm	Operational Research -II

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -IV (2023- 24)

Unit Test-III

Sr no	DATE	TIME	SUBJECT
1	18/04/2024	11:00-12:00 pm	Operational Research -II
2	20/04/2024	11:00-12:00 pm	P.D.E.
3	22/04/2024	11:00-12:00 pm	A.N.M
4	24/04/2024	11:00-12:00 pm	Cosmology
5	27/04/2024	11:00-12:00 pm	Dynamical System

HOD Maths

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Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -IV (2023- 24)

Unit Test-I

Sr no	DATE	TIME	SUBJECT
1	23/03/2024	12:00-1:00 pm	Dynamical system
2	26/03/2024	12:00-1:00 pm	P.D.E.
3	27/03/2024	12:00-1:00 pm	A.N.M
4	28/03/2024	12:00-1:00 pm	Cosmology
5	30/03/2024	12:00-1:00 pm	Operational Research -II

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -II (2023- 24)

Unit Test-I

Sr no	DATE	TIME	SUBJECT
1	01/04/2024	11:30-12:30 pm	Real Analysis
2	02/04/2024	11:30-12:30 pm	A.N.M
3	03/04/2024	11:30-12:30 pm	Differential Geometry
4	04/04/2024	11:30-12:30 pm	Operations Research

HOD, Maths

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Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM - III (2023 - 24)Unit Test-III

Sr no	DATE	TIME	SUBJECT
1	27/10/2023	11:00-12:00 pm	Operation Research-I
2	28/10/2022	11:00-12:00 pm	Complex analysis
3	30/10/2022	11:00-12:00 pm	Functional analysis
4	31/10/2022	10:00-11:00 am	Mathematical methods
5	01/11/2022	10:00-11:00 am	General relativity

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -I (2023- 24)

Unit Test-III

Sr no	DATE	TIME	SUBJECT
1	07/11/2023	12:00-1:00 pm	Algebra
2	08/11/2023	12:00-1:00 pm	ODE
3	09/11/2023	12:00-1:00 pm	Topology
4	10/11/2023	12:00-1:00 pm	Integral Equation

HOD, Maths

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Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -III (2023- 24)

Unit Test-II

Sr no	DATE	TIME	SUBJECT
1	25/09/2023	12:00-1:00 pm	Complex Analysis
2	26/09/2023	12:00-1:00 pm	Functional Analysis
3	27/09/2023	12:00-1:00 pm	Advanced Mathematical Method
4	29/09/2023	12:00-1:00 pm	General Relativity

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -I (2023- 24)

Unit Test-II

Sr no	DATE	TIME	SUBJECT
1	16/10/2023	11:00-12:00 am	Algebra
2	17/10/2023	11:00-12:00 am	ODE
3	18/10/2023	11:00-12:00 am	Topology
4	19/10/2023	11:00-12:00 am	Integral Equation

HOD, Maths

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Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -III (2023- 24)

Unit Test-I

Sr no	DATE	TIME	SUBJECT
1	23/08/2023	12:00-1:00 pm	Complex Analysis
2	24/08/2023	12:00-1:00 pm	Functional Analysis
3	25/08/2023	12:00-1:00 pm	Advanced Mathematical Method
4	26/08/2023	12:00-1:00 pm	General Relativity

HOD, Maths

Time Table

Nabira Mahavidyalaya Katol

DEPARTMENT OF MATHEMATICS

M.Sc. SEM -I (2023- 24)

Unit Test-I

Sr no	DATE	TIME	SUBJECT
1	05/09/2023	12:00-1:00 pm	Algebra
2	06/09/2023	12:00-1:00 pm	ODE
3	07/09/2023	12:00-1:00 pm	Topology
4	08/09/2023	12:00-1:00 pm	Integral Equation

HOD, Maths

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -I (paper-I; M-1):Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Ku. Payal Chandele	Payal	41	Bhavna R. Wanatkar	Bhavna.
2	Shubhangi chandele	Schandele	42	Pratiksha P. Dandekar	Pdandekar
3	Tejaswini Kharpuriye	TK	43	Arjum U. Pande	
4	Divyani Sukhdeve		44	Prapti Tatekar	Ptatekar
5	Ku. Vaishnavi H. Tibhane		45	Yashika D. Raut	Yraut
6	Ku. Sanika A. Bidkar	SABidkar	46	Akanksha G. Dhote	Akanksha.
7	Ku. Shreya S. Akhare		47	Pallavi K. Gathe	Pgathe
8	Ku. Roshani A. Rewatkar		48	Sameera S. Sayam	
9	Ku. Gunjan D. Rewatkar	GRudhe	49	Sukanni R. Borkar	Borkar
10	Ku. Varsha N. Dongare	V.N. Dongare	50	Kalyani R. Kedare	Rkedare
11	Ku. Dimpal W. Dongre	Dongre	51	Mayur R. Wathudkar	MRWathudkar
12	Ku. Gauri P. Bagde	Bagde.	52	Bhagyashri D. Dhandale	Bhandale
13	Ku. Roshani D. Vikey		53	Prachi Pradoliya	Pradoliya
14	Ku. Vaishnavi H. Sahare	Sahare	54	Hita P. Dewase	Hdewase
15	Ku. Sakshi P. Nasmasare	Sakshi	55	Pallavi M. Bannagare	Pbannagare
16	Ku. Sanjivani S. Chaple	Schaple	56		
17	Ku. Kautika R. Jungbare	K.R. Jungbare	57		
18	Ku. Sakshi H. Chichmalkar	Schichmalkar	58		
19	Mr. Hujef R. Shaikh		59		
20	Mr. Sumit G. Dhanre	Dhanre	60		
21	Mr. Sarang D. Kohale		61		
22	Mr. Bharat Rusliya		62		
23	Ku. Bhagyashri V. Chaure	Ek chaure	63		
24	Ku. Sahani G. Khodankar	Sukankar	64		
25	Peryal S. Rewatkar	P.S.Rewatk	65		
26	Achal A. Banait	ABanait	66		
27	Prajali D. Rewatkar		67		
28	Rushal Salam	Salam	68		
29	Harshada Badeut	Hbadeut	69		
30	Arpesh Dongre	Adongre	70		
31	Dayani Dabare	DS Dabare	71		
32	Srushti Nimbarkar	S.R. Nimbarkar	72		
33	Gauri Raut	Graut	73		
34	Sanskruti Gajbe	S.S Gajbe	74		
35	Bhavika C. Bagwe		75		
36	Mahendra R. Bhakte	MRBhakte	76		
37	Shubham H. Meshram	S.H. Meshram	77		
38	Kajal R. Katare	Rakare	78		
39	Gunjan M. Shembekar	Gshem	79		
40	Rani J. Kharpuriya		80		

Name & Signature of Teaches : Mr. N.T. Katre

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Name of Mahavidyalaya/Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester-I (Paper-II): Assignment-I

S.N.	Name of Students	Signature	Name of Students	Signature
1	Kavlika R. Junghare	K.R. Junghare	43 Dameena S. Sayam	Sayam.
2	Sakshi H. chichmalkar	Schichmalkar	44 Devyani S. Dhore	D.S.Dhore
3	Bhagyashree V. Chanar	Bvchanar	45. Gauri P. Raut	Graut.
4	S. H. Meshram	S.H.Meshram	46 Achal Kamble	A.J. Kamble
5	M. R. Bhakte	M.R.Bhakte	47 Varsh Dongre	V.V. Dongre
6	M.R. Waddudhe	M.R.waddudhe	48 Yishikel D. Raut	D.Raut
7	D.R. Gawande	D.R. Gawande	49 Payal S. R	P.S.Rewatkar
8	S.A. Bidkar	S.A.Bidkar	50 Bhavika C. Bhoyar	Bhoyar
9	S. D. Rewatkar	Srewatkar	51. Dimpal W. Borkar	Dborkar
10	A.D. Pande	Apande	52 Gunjan Shankarrao Gahandekar	Gahandekar
11	Pivjani D. Surjuse	Spsurjuse	53 Kalyani Kadwe	Kakadwe
12	Payal A. Chandak	Pchandak	54 Prapti Talekar	Ptalekar
13	Tejaswini R. Khapekar	Tkhapekar		
14	Achal A. Banait	Abanait		
15	Pallavi K. Gadhe	Pgadhe		
16	Rutuja A. Raut	Araut		
17	Hira P. Dewase	Hdewase		
18	Suhani R. Borkar	Borkar		
19	Sanskruti Gajbe	S.S Gajbe		
20	Shubhangi Chandele	Schandele		
21	Srushti Nimburkar	Snimbhi		
22	prachi padoliya	Ppadoliya		
23	Akanksha Dhole	Adhole		
24	Rohani Rewatkar	Rrewatkar		
25	Gunjan Rewatkar	GRwdkr		
26	Gauri Purushottam Boyde			
27	Sayali Shrirame	Sshriramc		
28	Vaishnavi Sahare	Vsahare		
29	Samiksha S. Chaple	Schaple		
30	Suhani G. Khadatkar	Skhadatkar		
31	Ritesh S. Dongre	Rdongre		
32	Bhairavi V. Marbate	Vmarbate		
33	kajal R. kalase	Rkalase		
34	Bhagyashri D. Chandak	Bchandak		
35	Shreya S. Akhare	SAkhare		
36	Vaishnavi Tabhare	Vtabhare		
37	Sakshi P. Narnaware	Sakshi P. Narnaware		
38	Raj Kharpuriya	RK		
39	Amita A. Kadu	Akadu		
40	Devina R. Khawse	Dkhawse		
41	Pragati D. Rewatkar	Prewatkar		
~~42 Gunjan~~				
42.	Bhavana Wasulkar	Bhwasu		

Name & Signature of Teacher } Mr. R.B. Chavare

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Nabi ...havidyalaya, Katol
Dep ...nt of Mathematics
Assign ...ubmission attendance
...ion (2023-24)
B.Sc Semeste... III ...paper-I; M-5):Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Chitralekha V. Ghadge	Ghadge	41	Anjali N. Gaikwad	Anjali
2	Vikas . D. Bansi	DBansi	42	Ruchita S Kalbande	R.S.Kalbande
3	Lukesh G. Sawarkar	Lsawarkar	43	Prachi R Tekade	Rekade
4	Vidya S. Mahaskalhe	Vidya	44	Sakshi Dhote	Dhote
5	Sharda C. chandele	Schandele	45	Bhagyashri Ghorse	Ghorse
6	Kunal G. Gawande	Gawande	46	Leena R. Tiple	Tiple
7	Suraj M. Baramase	SBaramase	47	Vaishnavi A Tawade	Atawade
8	Ekta R. Baramase	EBaramase	48	Om S. Gupta	Om S.
9	Mayuri D. Kapase	Mkapase	49	Divyani R. Ninje	Dninje
10	Afiya A. Pathan	Apathan	50	Laxmikant S. Khandait	L.S. Khandait
11	Sneha P. Bondhare	S.P. Bondhare	51	Dhanashri G. Kalambe	
12	Manisha M. Aage	M.M. Aage	52	Tashika K. Deshmukh	
13	Divya R. Bandare	Dbandare	53	Aditya H. Pathade	A.H.Pathade
14	Vikki V. Doble	Vdoble	54		
15	Divya S. Chapekar	Dchapekar	55		
16	Vaishali T. Devase	Vdevase	56		
17	shreya m. shedame	Shedame	57		
18	Shamreen Pathan	Spathan	58		
19	Ayan S. Shaikh	Ashaikh	59		
20	Dakshika W. Gawai	Dgawai	60		
21	Dhanavi S. Somkuwar	Dsomkuwar	61		
22	Vaibhavi V. Kadawe	Vkadawe	62		
23	Rupali R. Losle	R.Losle	63		
24	Pritam D. Ingole	Pingole	64		
25	Yash R. Junghare	Rjunghare	65		
26	Kushal R. Nasane	K.Rnasane	66		
27	Nayan S Yelekar	NYelekar	67		
28	Samiksha D. Tarase	Dtarase	68		
29	Tanushri Dhote	T.D.Dhote	69		
30	Nikita N Chauhan	NChauhan	70		
31	Ishant U. Ghagare	Ughagare	71		
32	Akshay D. Thapase	A.D.Thapse	72		
33	Vinay G. Bagde	VinayBagde	73		
34	Aashish S. Bansit	ABansit	74		
35	Kirti Panchbhai	Kirti	75		
36	Divya kumbhare	divya	76		
37	Sarvesh N. Gajbhiye	Sarvesh	77		
38	Minal K. Dhamde	Mdhamde	78		
39	Tushar D. Waghmare	Twaghmare	79		
40	Chinty Y. Hajare	Yhajare	80		

Name & Signature of Teacher : Mr. R.B. Chawase

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -III (paper-II; M-6):Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Kunal · G. Gawande		41	Ku. Ruchita Kalbande	R.S.Kalbande
2	Lukesh G. Sawarkar		42	Mr. Sarvesh M. Gajbhiye	
3	Kushal R. nasare	K.R.nasare	43	Kirti V. Panchbhai	
4	Vikas · D. Barai		44	Anchal S. Banait	
5	Divya S. Chapekar		45	Prachi R. Tekade	
6	Ku. M.M. Aage	M.M. Aage	46	Dhanashri Kalambe	D.G.Kalambe
7	Ku. V.A. Pawade		47	Toshika K. Deshmukh	
8	Ku. R.R. Gosle	R. Gosle	48	Minal K. Dhande	
9	Nayan S. Yelekar		49	Vaishali T. Dewase	
10	Anjali Gaikwad		50	Vidya S. Maraskolhe	
11	Dharavi S. Sonkusare		51	Divyani R. Ninje	
12	Saroj M. Barmase		52	Divya. R. Kumbhare	
13	Sharda O. chandele		53	Nikita N. Chauhan	
14	Mr. Abhay D. Chopade		54		
15	Mr. Ishant U. Ghagare		55		
16	Mr. Shenukh V. Pathan		56		
17	Mr. Tushar D. Waghmare		57		
18	Mr. Chintu Y. Hajare		58		
19	Mr. Lapunkant S. Khandait		59		
20	Mr. Yash R. Junghare		60		
21	Ku. Ekta R. Barmase		61		
22	Ku. chitralekha V. Ghadge		62		
23	Ku. Vaishnavi A. Pawade		63		
24	Ku. Tanushri D. Dhote		64		
25	Ku. Bhagyashri D. Ghorse		65		
26	Ku. Leena R. Tiple		66		
27	Shreya M. Shedame		67		
28	Alfiya A. Pathan		68		
29	Satiksha D. Tatase		69		
30	Divya R. Bondre		70		
31	Darshika U. Cavai		71		
32	Mr. Vinay G. Bagde		72		
33	Ku. Sneha Bandhare		73		
34	Sakshi Dhopee		74		
35	Aditya Pathade	A.H.Pathade	75		
36	Mayuri D. Kapase.		76		
37	Ayan S. Sheikh		77		
38	Vikki V. Doble		78		
39	Om S. Gupta		79		
40	Pritam D. Ingole		80		

Name & Signature of Teacher : Mr. N.T. Katre

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Nabira Mahavidyalaya Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -V (paper-I): Assignment-I (Unit 1 : Analytic functions)

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar		31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	K.R.GURAV
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M. Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	M.G. Dharme
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare	I.B. kasare	39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne		46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	S.S.Dhote
21	Rohit R. Jaiswal		51	Sonali M. Pandey	S.M. Pandey
22	Sumit K.Thakre		52	Yogesh B. Mahalle	
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teacher : N.T. Kathe

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Nabira Mahavidyalaya Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -V (paper-I): Assignment-II Unit - 2 (Conformal Transfus)

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar		31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	K.R.GURAV
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M.r Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	M.G.Dharme
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare	I.B.kasare	39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne		46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	S.S.Dhote
21	Rohit R. Jaiswal		51	Sonali M. Pandey	
22	Sumit K.Thakre		52	Yogesh B. Mahalle	
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teacher : Mr. N.T. Katse

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Nabira Mahavidyalaya Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -V (paper-II):Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar		31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	K.R.GURAV
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M.r Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	M.G.Dharme
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare	I.B. Kasare	39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne	P.G.MUNNE	46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi	P.P.malvi	47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	SSheikh
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	S S.Dhote
21	Rohit R. Jaiswal		51	Sonali M. Pandey	S.M.Pandey
22	Sumit K.Thakre		52	Yogesh B. Mahalle	Y.B.Mahalle
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe	D.L.Maraskolhe	59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teaches : Mr. N.T. Katre

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Nabira Mahavidyalaya Katol
Department Of Mathematics
Assignment Submission attendance
Session(2023-24)
B.Sc. Semester- II(Paper-I):Assignment-I

SN	Name of Student	Sign	SN	Name of Student	Sign	SN	Name of Student	Sign
1	D. Dongre	Dongre	31	Sanskruti Jaiswal	S.Jaiswal	61		
2	R. Rewatkar	Rewatkar	32	Gauri Raut	Gauri	62		
3	S.A. Chandele	Schandele	33	Bhagyashri Dhandole	Dhandole	63		
4	D.D. Suryvanshi	Suryvanshi	34	Hujef Sheikh	Sheikh	64		
5	S. Shriramwar	Shriramwar	35	Achal A. Banait	Banait	65		
6	P.S. Rewatkar	P. Rewatkar	36	Vaishavi Sahare	Sahare	66		
7	R.D. Salam	R.D. Salam	37	Tejaswini R. Kharpurje		67		
8	G.M. Shembekar	Shembekar	38	Pallavi K. Gothe	Gothe	68		
9	A.U. Pande		39	Sakshi Chichmalkar	Chichmalkar	69		
10	B.A. Wasulkar	Bhawade	40	Kavita Junghare	K.R. Junghare	70		
11	S.P. Narnaware	Narnaware	41	Akanksha Dhote	Dhote	71		
12	G.D. Rewatkar	GRedk	42	Hiraman Dewade	Dewade	72		
13	P.P. Dandhare	P.Dandhare	43	Sanika Bidkar	S.Bidkar	73		
14	S.R. Bankar	Bankar	44	Samiksa Sayam		74		
15	P.A. Chandele	Pachal	45			75		
16	P.S. Padole	Padole	46			76		
17	U.H. Tabhane	UHT	47			77		
18	K.R. Kadu	K.R.Kadu	48			78		
19	R.I. Kharpurje	RIK	49			79		
20	S.S. Akhare	S.Akhare	50			80		
21	M.P. Bhakte	M.Bhakte	51			81		
22	S.P. Rewatkar	Sprewatkar	52			82		
23	G.P. Bayde	G.P.B	53			83		
24	B.R. Rushiya	B.R.Rushiya	54			84		
25	S.S. Chaple	S.Chaple	55			85		
26	R.D. Vikey	R.D.Vikey	56			86		
27	S.H. Meshram	S.H.Meshram	57			87		
28	D.S. Dhanre	D.S.Dhanre	58			88		
29	K.A. Borkar	K.A.Borkar	59			89		
30	A.P. Sangde	A.P.Sangde	60			90		

Name &Signature of Teacher: R. B. Chaware

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Nabira Mahavidyalaya, Katol

Department of Mathematics

Assignment Submission attendance

Session (2023-24)

B.Sc. Semester -II (paper-II): Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Sakshi H. chichmalkar	S.Chichmalkar	38		
2	Kavitika R. Junghare	K.R.Junghare	39		
3	Hirra P. Deoware	Hdeoware	40		
4	Devyani S. Dawale	D.S.Dawale	41		
5	Kalyani A. Renghe	K.A.Renghe	42		
6	Sanskruti S. Gajbe	S.S.Gajbe	43		
7	Payal A. Chandele	Pchandele	44		
8	Shubhangi A. Chandele	Achandele	45		
9	Divyani D. Suwase	Dsuwase	46		
10	Suhani R. Borkar	Borkar	47		
11	Prachi S. Pardhi	Pardhi	48		
12	Vaishnavi H. Sahare	Vsahare	49		
13	Gauri P. Bagde	Gbagde	50		
14	Dimpal N. Dongre	Dongre	51		
15	Sayali S. Shriname	Sshriname	52		
16	Sarang D. Rewatkar	SARANG	53		
17	Gunjan D. Rewatkar	Grewatkar	54		
18	Sanika A. Bidkar	SABidkar	55		
19	Prapti Talekar	Ptalekar	56		
20	Bhavana Weskulkar	Bhavana	57		
21	Dameera D. Dayum	Ddayum	58		
22	Bharat R. Bhoyar	Bhoyar	59		
23	Sakshi P. Narnaware	Snarnaware	60		
24	Rohani A. Rewatkar	Rrewatkar	61		
25	Gunjan M. Shembekar	Gshembekar	62		
26	Rajeshwini R. Kharpurya	RRK	63		
27	Achal A. Banait	ABanait	64		
28	Pallavi K. Gathe	Pathe	65		
29	Arjun V. Pande	Apande	66		
30	Shreya S. Akhare	SAkhare	67		
31	Pragati D. Rewatkar	Prewatkar	68		
32	Kalyani R. Kadave	Kradave	69		
33	Bhagyashri Nandale	Bhokal	70		
34	Akanksha Dhote	Adhote	71		
35	Mahendra Bhakte	MBBhakte	72		
36	Husef Sheikh	Hsheikh	73		
37	Vaishnavi Jabhare	Vjabhare	74		

Name & Signature of Teacher: N. T. Katre

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc. Semester -IV (paper-I): Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Chitralekha V. Ghadge	Ghadge	32	Sharukh pathan	Pathan
2	Leena R. Tiple	Tiple	33	Minal. K. Dhamde	
3	Lukesh G. Sawarkar		34	Sakshi. O. Dhapre	
4	Divya S. Chaphekar		35	Saroj M. Barmase	
5	Bhagyashini D. Ghoose		36	Darshika Sawai	
6	Tashika Deshmukh	Deshmukh	37	Ayan S. Sheikh	
7	Dhanshri Kalambe	D.G.Kalambe	38	Vikki V. Doble	
8	Pritam D. Ingole	Ingole	39		
9	Sharda O. Chaudele	S.O.chadek	40		
10	Tanushri D. Dhote		41		
11	Mayuri O. Kapase	Kapase	42		
12	Kirti Panchbhai	Kirti	43		
13	Sarvesh Gajbhiye		44		
14	Tanushri Dhote	T. D Dhote	45		
15	Ekta Barmase	E. Barmase	46		
16	Ishant Ghagare	Ghagare	47		
17	Vaishnavi Pawade		48		
18	Aditya H. Pathade	A.H.Pathade	49		
19	Prachi R. Tekade	Tekade	50		
20	Kunal A. Gawande		51		
21	Kushal R. Nasare	K.R.nasare	52		
22	Yash R. Jumphale		53		
23	Vikas D. Bavai	Dbavai	54		
24	Alfiya A. Pathan	Apathan	55		
25	Samiksha D. Tarase	Tarase	56		
26	Divya R. Bardee	Bardee	57		
27	Vaishali T. Dewase	Tdewase	58		
28	Dhanavi S. Somkuwar		59		
29	Shreya M. Shedame	Shedame	60		
30	Anjali N. Wankwad	Anjali	61		
31	Manisha M Aage	M.M Aage	62		

Name & Signature of Teacher: N. T. Katre

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -IV(paper-II):Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Mayuri D. Kapase	M.Kapase.	41	Himanshu Nagrawar	
2	Dhanshri G. Kalambe	D. G. Kalambe	42	SAKSHI DHOPEE	
3	Darshika W. Sawai	Dsawai	43	Toshika Deshmukh	
4	Chitralekha V. Ghadge	Ghadge	44		
5	Ekta R Barmase	Ekbarmase	45		
6	VIKKI V. DOBLE	Vinni	46		
Sem II 7	Aditya. H. Pathade	A.H.pathade	47		
8	Afsiya A. Pathan	Afsiyapathan	48		
9	Vinay Bayde	Vinay Bayde	49		
Sem II 10	Ayaz g. shaikh	Shaikh.	50		
11	Manisha M Aage	M.M.Aage	51		
12	Samiksha D. Tarase	Dtarase	52		
13	Divya R. Bondre	Rbondre	53		
14	Anchal S. Bansod	Bansod	54		
15	Kirti Panchbhai	Kirti	55		
16	Sarvesh M. Gajbhiye	MGajbhiye	56		
17	Dharavi S. Sonkusare	Dsonkusare	57		
18	Lukesh G. Sawarkar	Lgsawarkar	58		
19	Leena R. Tiple	Rtiple	59		
20	Rupali R. Borle	Rborle	60		
21	Sharda O. chandele	Schandele	61		
22	Bhagyashri D. Ghoose	Dghoose	62		
23	Diksha S. Chafekar	Schafekar	63		
24	Ishant U. Ghagare	Ughagare	64		
25	Vikas .D. Barai	DBarai	65		
26	Kushal R. Nasare	K.R.nasare	66		
27	Prachi R. Tekade	Rtekade	67		
28	Minal. K. Dhamde	Mdhamde	68		
29	Shreya M Shelke	Shelke	69		
30	Saroj M. Barmase	Mbarmase	70		
31	Tanushri Dhote	T. D. Dhote	71		
32	Pritam D. Ingle	Pingale	72		
33	Abhay D. Chopde	A.D.Chopde	73		
34	Kunal G. Gawande	Kgawande	74		
35	Anjali N. Kaikwad	Anjali	75		
36	Vaishnavi A Pawade	Vpawade	76		
37	Chinmay Nagar		77		
38	Vaishali T. Deokate	Vdeokate	78		
39	Yash R. Junghare	Yjunghare.	79		
40	Shanukh. U. pathan	Upathan	80		

Name and Signature of Teacher : R. B. Chavare
Katol

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -VI (paper-I): Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar		31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M.r Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare		39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne		46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	
21	Rohit R. Jaiswal		51	Sonali M. Pandey	
22	Sumit K.Thakre		52	Yogesh B. Mahalle	
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teacher: N. T. Katre

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Nabira Mahavidyalaya, Katol
Department of Mathematics
Assignment Submission attendance
Session (2023-24)
B.Sc Semester -VI (paper-II): Assignment-I

S.N.	Name of Students	Sign	S.N.	Name of Students	Sign
1	Aditya D. Amparwar	Aditya.D.	31	Janhavi M. Thakre	
2	Anikesh P. Kumeriya		32	Jay P. Kumeriya	
3	Ankush A. Bhange		33	Kanchan R. Gurao	K.R.G.VP-AU
4	Bhagyshri D. Raut		34	Karina N. Dhobale	
5	Dipanjali M.r Alone		35	Manish K. Shende	
6	Geetkumar Bhasme		36	Mayuri A. Junankar	
7	Harshal A. Deshmukh		37	Mohnish G. Dharme	
8	Hina A.Dhannade		38	Nikita M. Dhole	
9	Isha B. Kasare		39	Pranav G. Wanjari	
10	Krutika M. Kale		40	Ravikant A. Jodh	
11	Lucky C. Ikhar		41	Riba M.E. Baig	
12	Nayan K. Sambhare		42	Ritu E. Yenorkar	
13	Neha H. Sable		43	Ruchika R. Bhasme	
14	Neha S.Kakde		44	Sahil H. Sheikh	
15	Pawan V. Junghare		45	Sakshi S. Kumeriya	
16	Pragati G. Munne		46	SaniyaP.M.A. Sheikh	
17	Paranay P. Malvi		47	Satish S. Taywade	
18	Pranjali D. Rewatkar		48	Sayama R. Sheikh	
19	Pravina P Lokhande		49	Shivan J. Didawat	
20	Rahul R. Wankhede		50	Sneha S. Dhote	
21	Rohit R. Jaiswal		51	Sonali M. Pandey	
22	Sumit K.Thakre		52	Yogesh B. Mahalle	
23	Vishal S. Tonge		53		
24	Vrunda S. Hajare		54		
25	Aachal R. Charde		55		
26	Anjali P. Sawarkar		56		
27	Bhawana R. Bhoyar		57		
28	Chaitali S. Murkute		58		
29	Devanshu L. Maraskolhe		59		
30	Gayatri D. Damedhar		60		

Name & Signature of Teacher: N. T. Kathe

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B.Sc. Sem-5 / Mathematics-I

Assignment on Unit-1 (2023-24)

Last Date of Submission: 06/09/2023

NOTE: Solve all these questions in triplicate.

Questions (Short Answer)

(1) Define: Analytic function, Harmonic function, orthogonal curves

(2) Find the derivative of $f(z)=z^3$ by using first principle.

(3) For what values of z, the function w defined by $w=e^z$ ceases to be analytic?

(4) For what values of z, the function w defined by $w=z^{1/3}$ ceases to be analytic?

(5) Write the Cauchy-Riemann equations in polar form for the analytic function $f(z)=u+iv$.

(6) Find the harmonic conjugate of a function $u=2x(1-y)$.

Questions (Long Answer)

(1) Show that $f(z)=\bar{z}$ is continuous at $z=z_0$ but not analytic at $z=z_0$.

(2) Find the values of a & b such that the function $f(z)=x^2+ay^2-2xy+i(bx^2-y^2+2xy)$ is analytic. Also, find $f'(z)$.

(3) Define the analytic function. $f(z)$. For what values of z, the function w defined by the equations $z=\sinh u\cos v+i\cosh u\sin v$, $w=u+iv$ ceases to be analytic?

(4) Prove that the function $f(z)=u(x,y)+iv(x,y)$ is analytic at any point $z=x+iy$ in a region R, if

(i) $\partial u/\partial x=\partial v/\partial y$, $\partial u/\partial y=-\partial v/\partial x$, and

(ii) the partial derivatives $\partial u/\partial x$, $\partial u/\partial y$, $\partial v/\partial x$, $\partial v/\partial y$ are continuous functions of x, y in a region R.

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(5) Prove that the necessary condition for a function $w = f(z) = u(x,y) + iv(x,y)$ to be analytic at any point $z = x+iy$ in a region R, is that u & v satisfy Cauchy-Riemann equations: $\frac{\partial u}{\partial x} = \frac{\partial v}{\partial y}$, $\frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$, provided $\partial u/\partial x$, $\partial u/\partial y$, $\partial v/\partial x$, $\partial v/\partial y$ exist.

(6) Show that the function $f(z)$ is constant if it is analytic with constant modulus.

(7) If $w = f(z) = u(x,y) + iv(x,y)$ is analytic function at any point $z = x+iy$ in a region R, then prove the Cauchy-Riemann eqns in polar form are

$$\frac{\partial u}{\partial r} = \frac{1}{r}\frac{\partial v}{\partial \theta} \quad \text{and} \quad \frac{\partial v}{\partial r} = -\frac{1}{r}\frac{\partial u}{\partial \theta}$$

(8) If $u - v = (x-y)(x^2+4xy+y^2)$ and $f(z) = u+iv$ is an analytic function of $z = x+iy$, find $f(z)$ in terms of z.

(9) If $u = x^2 - y^2$, $v = \frac{-y}{x^2+y^2}$, then show that both u and v are harmonic functions of x, y, but $u+iv$ is not an analytic function of z.

(10) If $u+v = \frac{2\sin 2x}{\cosh 2y - \cos 2x}$ and $f(z) = u+iv$ is an analytic function of z, then find $f(z)$ in terms of z.

(11) If $f(z) = u+iv$ is analytic function of z, prove that $\left(\frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2}\right)|f(z)|^2 = 4|f'(z)|^2$.

(12) Show that the function
$u = \sin x \cosh y + 2\cos x \sinh y + x^2 - y^2 + 4xy$
is harmonic and determine the corresponding analytic function $f(z) = u+iv$.

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B. Sc. Sem-5/ Mathematics-I

Assignment on Unit-2 (2023-24)

Last Date of Submission: 30/09/2023

Note: Submit the Solutions of the following Questions in 3 sets.

Questions

(1) (a) Define Conformal and isogonal transformations.

(b) Define Critical points and ordinary points of a transformation $\omega = f(z)$.

(c) Define Mobius (or bilinear) transformation, and fixed points of bilinear transformation.

(d) Show that the bilinear transformation $\omega = \frac{az+b}{cz+d}$ has one or two fixed points.

(e) Define the transformations given below:
(i) Translation (ii) Rotation (iii) Magnification (iv) Inversion.

(f) Find the fixed points of the following bilinear transformation
(i) $\omega = \frac{3iz+1}{z+i}$ (ii) $\frac{(2+i)z-2}{z+1}$

(g) Show that the transformation $\omega = z^2$ transform the line $x=2$ into the parabola in w-plane.

(2) Let a rectangular domain R be bounded by $x=0$, $y=0$, $x=2$, $y=1$. Determine the region R' of w-plane into which R is mapped under the transformation $\omega = \sqrt{2}\, e^{i\pi/4} z + (1-2i)$.

(3) Consider the transformation $\omega = z e^{i\pi/4}$. Determine the region R' of w-plane corresponding to the triangular region R bounded by the lines $x=0, y=0$ and $x+y=1$ in z-plane.

(4) Find the image of the infinite strip $\frac{1}{4} \le y \le \frac{1}{2}$ under the transformation $\omega = \frac{1}{z}$.

(5) Find the image of a circle $|z-3i| = 3$ under the mapping $\omega = \frac{1}{z}$.

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(6) Show that under the transformation $w = \frac{1}{z}$, the image of the hyperbola $x^2 - y^2 = 1$ is the lemniscate $R^2 = \cos 2\phi$.

(7) For the conformal transformation $w = z^2$, show that the circle $|z-1| = 1$ transforms into the cardioid $R = 2(1+\cos\phi)$, where $w = Re^{i\phi}$, in the w-plane.

(8) Find the image and draw a rough sketch of the mapping of the region $1 \le x \le 2$ and $2 \le y \le 3$ under the mapping $w = e^z$.

(9) Find the image of the circle $|z-2| = 2$ under the bilinear transformation $w = \frac{z}{z+1}$.

(10) Show that the transformation $w = \frac{2z+3}{z-4}$ transforms the circle $x^2 + y^2 - 4x = 0$ into the straight line $4u + 3 = 0$.

(11) Show that the transformation $w = \frac{iz+2}{4z+i}$ transforms the real axis in z-plane to a circle in the w-plane.

(12) Find the bilinear transformation that maps the points $z_1 = 2$, $z_2 = i$, $z_3 = -2$ into the points $w_1 = 1$, $w_2 = i$, $w_3 = -1$, respectively.

(13) Find the mapping of x-axis under the transformation $w = \frac{i-z}{i+z}$ onto the w-plane.

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Nabira Mahavidyalaya, Katol

Department of Mathematics (2023-24)

B. Sc. Semester-2 (Maths-II)

Assignment-1

(1) A particle moves so that its position vector is given by $\bar{r} = \cos\omega t\,\bar{i} + \sin\omega t\,\bar{j}$, where ω is a constant. Show that

(i) the velocity $\bar{v}$ of the particle is perpendicular to $\bar{r}$.

(ii) the acceleration $\bar{a}$ is directed towards the origin and has magnitude proportional to the distance from the origin.

(iii) $\bar{r} \times \bar{v}$ = a constant vector.

(2) Evaluate $\bar{\nabla}.(\bar{A} \times \bar{r})$ if $\bar{\nabla} \times \bar{A} = \bar{0}$, where $\bar{A} = A_1\bar{i} + A_2\bar{j} + A_3\bar{k}$ and $\bar{r} = x\bar{i} + y\bar{j} + z\bar{k}$.

(3) Prove that $\nabla^2(r^n) = n(n+1)r^{n-2}$, where n is a constant and $\bar{r} = x\bar{i} + y\bar{j} + z\bar{k}$.

(4) If $\bar{A} = 2t^2\,\bar{i} - (t+2)\,\bar{j} + (t^2-4t)\,\bar{k}$ and $\bar{B} = \cos t\,\bar{i} + 4e^t\,\bar{j} - \sin t\,\bar{k}$, then find $\frac{d^2}{dt^2}(\bar{A} \times \bar{B})$ at $t=0$.

(5) Find the acute angle between the surfaces $xy^2z = 3x + z^2$ and $3x^2 - y^2 + 2z = 1$ at the point $(1,-2,1)$.

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(6) Show that $\nabla^2(\log r) = \frac{1}{r^2}$.

(7) If $\bar{V} = \bar{\omega} \times \bar{r}$, prove that $\bar{\omega} = \frac{1}{2} \operatorname{curl} \bar{V}$, where $\bar{\omega}$ is a constant vector and $\bar{r} = x\bar{i} + y\bar{j} + z\bar{k}$.

(8) If $\bar{F} = (3x^2y - z)\bar{i} + (xz^3 + y^4)\bar{j} - 2x^3z^2\bar{k}$, then find $\bar{\nabla}(\bar{\nabla}.\bar{F})$ and $\bar{\nabla} \times \bar{F}$.

(9) Find the directional derivative of $x^2y^2z^2$ at the point $(1,1,-1)$ in the direction of the tangent to the curve $x = e^t$, $y = \sin 2t + 1$, $z = 1 - \cos t$ at $t = 0$.

(10) Show that $\bar{F} = (2xy + z^3)\bar{i} + x^2\bar{j} + 3z^2x\bar{k}$ is conservative. Find a scalar potential ϕ such that $\bar{V} = \bar{\nabla}\phi$.

(11) Show that $(y^2z^3\cos x - 4x^3z)\,dx + 2z^3y\sin x\,dy + (3y^2z^2\sin x - x^4)\,dz$ is an exact differential of a function ϕ and then find ϕ.

(12) (a) If $\bar{A}$ is a constant vector, prove that $\bar{\nabla}(\bar{r}.\bar{A}) = \bar{A}$.

(b) Prove that the vector $\bar{A} = 3y^4z^2\bar{i} + 4x^3z^2\bar{j} - 3x^2y^2\bar{k}$ is ~~incompressible~~ solenoidal.

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(c) Show that if $F_1\,dx + F_2\,dy + F_3\,dz$ is an exact differential of a function ϕ, then $\bar{\nabla} \times \bar{F} = \bar{0}$, where $\bar{F} = F_1\bar{i} + F_2\bar{j} + F_3\bar{k}$.

(d) Find a, if $\bar{A} = (axy - z^3)\bar{i} + (a-2)x^2\bar{j} + (1-a)xz^2\bar{k}$ is irrotational.

(e) Find the directional derivative of $\phi = x^2yz + 2xz - 4$ at the point $(2,-1,1)$ in the direction of Y-axis.

(f) Prove that: $\bar{\nabla} \times (\bar{\nabla}\phi) = \bar{0}$, where ϕ is a differential scalar point function of x, y, z.

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Nabisa Mahavidyalaya, Katol

Department of Mathematics (2023-24)

B.Sc. Semester-4 (Maths-1)

Assignment-1

(1) If $X, Y \subseteq R$ be non-empty bounded sets, then prove that

(a) $\sup(X+Y) = \sup X + \sup Y$

(b) $\inf(X+Y) = \inf X + \inf Y$

(2) Let X be a non-empty subset of R which is bounded above. Prove that the real number M is the supremum of X if and only if

(a) $x \leq M, \forall x \in X$, and

(b) for each real no. $\epsilon > 0$, there is a real no. $x \in X$ such that $x > M - \epsilon$.

(3) Let X be a non-empty subset of R which is bounded below. Prove that the real no. m is the infimum of X if and only if.

(a) $x \geq m, \forall x \in X$, and

(b) for each real no. $\epsilon > 0$, there is a real no. $x \in X$ such that $x < m + \epsilon$.

(4) Prove that the completeness property imply the Dedekind Property, and conversely.

(5) State and Prove Archimedean Property.

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(6) For $x, y \in R$, prove that

(i) $|x|=0 \iff x=0$, (ii) $|-x|=|x|$ and

(iii) $|xy|=|x||y|$ (iv) $|x+y| \leq |x|+|y|$

(v) $|x-y| \leq |x|+|y|$

(7) Prove that the union of an arbitrary collection of open sets is open.

(8) Prove that the finite intersection of open sets is open. Illustrate by an example that the infinite intersection of open sets need not be open.

(9) For $X, Y \subseteq R$, prove that

(a) $X \subset Y \Rightarrow X^\circ \subset Y^\circ$ (b) $(X \cap Y)^\circ = X^\circ \cap Y^\circ$

(c) $(X \cup Y)^\circ \supset X^\circ \cup Y^\circ$.

(10) Let $X \subseteq R$. Prove that

(a) X° is an open set

(b) X° is the largest open subset of X

(c) X is open if and only if $X^\circ = X$.

(11) Define

(i) Bounded above set (ii) Bounded below set

(iii) Bounded set (iv) Supsemum of a set

(v) infimum of a set (vi) neighbourhood of a point

(vii) open set (viii) interior point of a set

(ix) interior of a set (x) Limit point of a set

(xi) Closed set (xii) Desived set (xiii) Closure of a set

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(12) If $X \subseteq R$ is a non-empty bounded set, then Prove that

(a) $-\sup(-X) = \inf X$, (b) $-\inf(-X) = \sup X$.

(13) (i) If $x, y \in R$, then Shew that $|x-y| = 0$ iff $x = y$.

(ii) If $x \in R$ and $0 \leq x < \frac{1}{n}$, $n \in N$, then prove that $x = 0$.

(iii) Prove that an open intesval is a nbd of each of its points.

(iv) Prove that the finite set is not a nbd of any of its points.

(v) For any set X, prove that $X^\circ \subset X$.

(vi) For any set X, prove that $X^{\circ\circ} = X^\circ$.

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Nabira Mahavidyalaya, Katol

Department of Mathematics (2023-24)

B. Sc. Semester-6 (Maths-1)

Assignment-1

(1) Define Subspace of a vector space V. Prove that if S is a nonempty subset of a vector space V then L(S) is the smallest subspace of V containing S.

(2) Define Linear span of a subset, Prove that if S is a subset of a vector space V, then $L(S) = S$ iff S is a subspace of V.

(3) Prove that a nonempty subset S of a vector space V is a subspace of V iff

(i) $u+v \in S$, $\forall\, u, v \in S$ (ii) $\alpha u \in S$, $\forall\, \alpha \in F$ & $\forall\, u \in S$.

(4) Show that the ordered set $\{(1,1,2), (1,-1,1), (1,3,3), (-1,3,0), (1,0,1)\}$ is linearly dependent. Find the largest linearly independent subset of it.

(5) If U and W are two subspaces of a vector space V, then prove that $U+W$ is a subspace of V and $U+W = [U \cup W]$.

(6) Let U and W are subspaces of a vector space V. Prove that $U \cup W$ is a subspace of V iff $U \subset W$ or $W \subset U$.

(7) Let $v_1, v_2, \ldots, v_n$ be n vectors of a vector space V. Prove that (a) $[v_1, v_2, \ldots, v_n] = [\alpha_1 v_1, \alpha_2 v_2, \ldots, \alpha_n v_n]$, $\alpha_i \neq 0$ are scalars, $1 \leq i \leq n$.

(b) $[v_1, v_2] = [v_1 - v_2, v_1 + v_2]$

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(8) In a vector space V over F, prove that
(i) $\alpha \cdot 0 = 0$, $\forall \alpha \in F$, $0 \in V$.
(ii) $0 \cdot u = 0$, $\forall u \in V$ and
(iii) $\alpha u = 0 \iff \alpha = 0$ or $u = 0$, $\forall \alpha \in F, u \in V$.

(9) Let $S = \{(1,1,0), (0,1,1), (1,0,-1), (1,1,1)\}$.
(i) Show that the ordered set S is linearly dependent.
(ii) Locate one of the vectors that belongs to the span of previous one.
(iii) Find the largest linearly independent subset of S whose span is $[S]$.

(10) If S & T are subsets of a vector space V, then prove that (i) $S \subset T \Rightarrow L(S) \subset L(T)$,
(ii) $L(S) = S \iff S$ is a subspace of V,
(iii) $L(L(S)) = L(S)$

(11) Find the span of a subset $S = \{(1,2,1), (1,1,-1), (4,5,-2)\}$ and prove that $(2,-1,-8) \in [S]$ but $(1,-3,5) \notin [S]$.

(12) Let U & W be two subspaces of vector space V and $Z = U + W$. Then prove that $Z = U \oplus W$ iff $z = u + w$ uniquely for any $z \in Z$ and for some $u \in U$, $w \in W$.

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Nabisa Mahavidyalaya, Katol

Department of Mathematics

B. Sc. Semester – 6 (Maths – 2)

Assignment – 1

2023 – 24

(1) Desive genesal and simple Galilean transformations Considesing two inestial frames S & S'. Also, obtain their inverse transformations.

(2) Show that $(ds)^2 = (dx)^2 + (dy)^2 + (dz)^2 - (cdt)^2$ is invasiant undes Losentz transformations.

(3) Explain Losentz-FitzGerald Contraction Idea. How this idea used to account for the negative result of the Michelson-Morley expesiment ?

(4) Show that the three dimensional volume element dxdydz is not Losentz invasiant, but the fous dimensional volume element dxdydzdt is Losentz invasiant.

(5) Define an inestial frame of reference. Show that Newton's Kinematical equations of motion ase invasiant undes Galilean transformations.

(6) Prove that $\nabla^2 - \frac{1}{c^2}\frac{\partial^2}{\partial t^2}$ is invasiant undes special Losentz transformation.

(7) Show that Losentz transformation is simply a sotation in the fous dimensional space.

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(8) Show that in an inertial frame, a body, not under the influence of any forces, moves in a straight line with constant velocity.

(9) Assume that the Lorentz transformations are linear transformations of the form $x' = Ax + Bt$ and $t' = Dx + Et$, $E > 0$. Consider $x^2 - c^2t^2 = x'^2 - c^2t'^2$ and the motion of the origin of S', deduce the Lorentz transformation.

(10) Show that the wave equation $\nabla^2 f - \frac{1}{c^2}\frac{\partial^2 f}{\partial t^2} = 0$ is not invariant under Galilean transformation.

(11) Describe Michelson-Morley experiment and comment on the importance of the experiment.

(12) Prove that the Lorentz transformations form a group.

(13) (a) State the fundamental postulates of special relativity.

(b) Show that the circle $x'^2 + y'^2 = a^2$ in S' is measured to be an ellipse in S if S' moves with uniform velocity relative to S.

(c) Discuss the outcome of M-M expt regarding fringe shift and stationary ether.

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Geotag Photos of Test Examination:











NABIRA MAHAVIDYDLAYA,KATOL

DEPARTMENT OF COMPUTER SCIENCE

SESSION 2023-2024

B.SC.PART II (Sem III & IV)

INTERNAL ASSESSMENT SUBMISSION

TEACHER NAME:M.R.MESHRAM

Sr.No.	Name of Students	Sem-III	Sem-IV
1.	AACHAL SUNIL BANAIT	Abanait	Abanait
2.	ABHAY DASHARATHRAO CHOPADE	A.D.Chopade	A.D.Chopade
3.	ADITYA HANUMANTRAO PATHADE	A.H.Pathade	A.H.Pathade
4.	ALFIYA AYUBKHAN PATHAN	Pathan	Pathan
5.	BHAGYASHRI DIWAKAR GHORSE		
6.	CHINTU YUVRAJ HAJARE		
7.	CHITRALEKHA VIJAYRAO GHADGE	Ghadge	Ghadge
8.	DHANASHRI GULAB KALAMBE	D.G.Kalambe	D.G.Kalambe.
9.	DIVYA RAMDAS BONDRE		
10.	DIVYA RAMESHWAR KUMBHARE	divya.	divya.
11.	DIVYANI RAJESH NIMJE	Dnimje	Dnimje
12.	DURGESH KAILASRAO UMALE		
13.	EKTA RAMESH BARMASE	EBarmase	EBarmase
14.	GAURAV SUKHADEV BHUJADE		
15.	HIMANSHU DILIPRAO NARNAWARE		

16.	ISHANT UMESH GHAGARE	Ighagare	Ighagare
17.	JAYANT SUKHDEV MARSKOLHE	Jayant	
18.	KHUSHBU GAJANAN KADWE		
19.	KIRTI VITTHAL PANCHBHAI	Kirti	
20.	LAKSHMIKANT SHRIDHAR KHANDAIT	L S. Khandait	LS. Khandait
21.	LEENA RAJENDRA TIPLE	Tiple	Tiple
22.	MAYURI DIGAMBAR KAPASE	MDkapase	MDKapase
23.	MINAL KISHOR DHAMDE	MKhamde	MKhamde
24.	NIKITA NARENDRA CHAUHAN	Chauhan	Chauhan
25.	PRITAM DEVENDRA INGOLE	Pingole	Pingole
26.	RUCHITA SURESH KALBANDE	R.S. Kalbande	
27.	RUDRA RAMESH KUMBHARE		
28.	RUTIKA GOPAL BORDE		
29.	SAHIL VITTHALRAO GAIKWAD		
30.	SAKSHI OMPRAKASH DHOPRE	SDhopre	
31.	SAMIKSHA DURGADAS TARASE	STarase	STarase
32.	SAMYEK RAJKUMAR PANCHBHAI		
33.	SHARUKH UMAR PATHAN	Supathan	Supathan
34.	SHREYA MUKUNDA SHEDAME	Shedame	Shedame

NAVODAYA VIDYALAYA SAMITI

35.	TANUSHRI DILIPRAO DHOTE	T. D. Dhote	T. D. Dhote
36.	TOSHIKA KRISHANRAO DESHMUKH	Deshmukh	Deshmukh
37.	TUSHAR DHANRAJ WAGHMARE	Waghmare	
38.	VAIBHAVI SANJAY KADAWE	Vkadaw	
39.	VAISHALI TIKARAM DEWASE	Dewase	Dewase
40.	VAISHNAVI ARUN PAWADE	Vapawade	Vapawade
41.	YASH RAMDASJI JUNGHARE	Yughare	Yughare

MR
INCHARGE

Department of Computer Scienc
Vasantrao Mahavidyalaya, Kato

NABIRA MAHAVIDYALAYA,KATOL

DEPARTMENT OF COMPUTER SCIENCE

INTERNAL ASSESSMENT SUBMISSION

B.SC.III

SESSION 2023-2024

Sr.No.	Name Of Students	SEM-V	SEM-VI
1.	Ku.A.R.Charde	Charde	Charde
2.	Mr.D.L.Maraskolhe	Dmaraskolhe	Dmaraskolhe
3.	Ku.G.D.Damedhar	gdamedhar	gdamedhar
4	Ku.J.M.Thakre		
5.	Mr.J.P.Kumeriya	Rkumeriya	Rkumeriya
6.	Ku.K.R.Gurao	K. Gurav	K.R.GURAV
7.	Mr.M.K.Shende	MKshende	MKshende
8.	Ku.M.A.Junankar	Mayuri	Mayuri
9.	Mr.M.G.Dharme	M.G.Dharme	M.G.Dharme
10.	Mr.R.A.Jodh	R.Jodh	R.Jodh
11.	Ku.R.E.Yenorkar		
12.	Mr.S.H.Sheikh	S Sheikh	S.Sheikh
13.	Mr.S.S.Taywade	Staywade	Staywade
14.	Ku.Sayama R.Sheikh	SSheikh.	SSheikh.
15.	Mr.S.J.Didawat		
16.	Ku.S.S.Dhote	S.S Dhote	S.S Dhote
17.	Ku.S.M.Pandey	SPandey.	SPandey.
18.	Mr.Y.B.Mahalle	YBmale	YBmale

NABIRA MAHAVIDYALAYA KATOL

INCHARGE

Department of Computer Science
Nabira Mahavidyalaya, Katol

NABIRA MAHAVIDYALAYA,KATOL

DEPARTMENT OF COMPUTER SCIENCE

INTERNAL ASSESSMENT SUBMISSION

SESSION 2023-24

TEACHER NAME :MADHURI R.MESHRAM

B. Sc. I (Sem I and Sem- II)

Sr.No.	Name of Students	Sem-I	Sem-II
1.	ACHAL SURESH KAMDE	A S. Kamde	
2.	AKANSHA GOPALRAO DHOTE		
3.	ARJUN UMESHRAO PANDE		
4.	ARPITA ASHOK KADU		
5.	BHAGYASHRI DILIPRAO DHANDALE		
6.	BHAIRAVI VIJAYRAO MARBATE		
7.	DARSHAN ARVIND SARODE	〃	
8.	DEVINA RAJENDRA KHAWSE		
9.	DIMPAL WASUDEV DONGRE		
10.	GAURI PURUSHOTTAM BAGDE		
11.	GRISHMA BHUSHANRAO BARDE	〃	
12.	GUNJAN DINESH REWATKAR		
13.	HIRA PRABHAKAR DEWASE		
14.	KAJAL RAJESH KATARE		
15.	MAHENDRA RAJENDRA BHAKTE		
16.	MAYUR RAJENDRA WADBUDHE		

17.	PALLAVI MADHORAO BANNAGARE		ABSENT
18.	MOHINI RAJENDRA PAWAR		
19.	PAYAL SHESHRAOJI REWATKAR	P. S. Rewatkar	P.S. Rewatkar
20.	PRACHI SANDESH PADOLIYA	Padoliya	Ppadoliya
21.	PRAPTI MANOJ TALEKAR	Patekar	
22.	PRATIKSHA P.DANDHARE	P. dandhare	P dandhar
23.	RANI IMRAT KHARPURIYA	RK	RK
24.	ROHANI ARJUN REWATKAR	Rewatkar	Rewatkar
25.	RUCHAL DEVENDRA SALAM	Salam	Salam
26.	RUTUJA AJAY RAUT	RRaut	
27.	SAKSHI PRAVIN NARNAWARE	Sakshi P. Narnaware	Sakshi P. Narnaware
28.	SAKSHI HARICHANDRA CHICHMALKAR	Chichmalkar	Chichmalkar
29.	SAMIKSHA SHANKAR CHAPLE	Chaple	Chaple
30.	SARANG DINESH REWATKAR	SRANGI	SARANG
31.	SARANG DIWAKAR KOHALE	ABSENT	ABSENT
32.	SAYALI SUNIL SHRIRAME	SShriram	Sshriram
33.	SHUBHAM H. MESHRAM	S. H. Meshram	S. H. Meshram.
34.	SUHANI RAVICHANDRA BORKAR	Borkar	Borkar
35.	SUMIT GAJANAN DHARME	SDharme	SDharme
36.	VAISHNAVI HARICHANDRA TABHANE	Vaish	Vaish.
37.	VARSHA NARAYAN DONGARE	V. N. Dongare	ABSENT

38.	SANIKA ASHISH BIDKAR	SABidkar	SABidkar
39.	YISHIKA D.RAUT	YRaut	YRaut
40.	SHREYA AKHARE	SAkhare	SAkhare
41.	C.M.BHOYAR	C.Bhoyar	C.Bhoyar
42.			
43.			
44.			
45.			

MR

Head
Department of Computer Science
Nabira Mahavidyalaya, Katol



DEPARTMENT OF MICROBIOLOGY AND BIOTECHNOLOGY
NABIRA MAHAVIDYALAYA, KATOL
INTERNAL ASSESSMENT METHADOLOGY

SESSION 2023-24

SUBJECT: - .....
THEORY INTERNAL MARKS

Name of Student.....Roll Number.....
Class.....
Name of Teacher.....
Paper: -

Sr. No.	Mode of Internal Assessment	Maximum Marks allotted	Mark Obtained	Maximum Marks allotted	Mark Obtained
		SEM -		SEM-	
1	Attendance and curricular activity	02		02	
2	Seminars	02		02	
3	Assignment	02		02	
4	Unit Test I	01		01	
5	Unit Test II	01		01	
6	Unit Test III	01		01	
7	Unit Test IV	01		01	
8	Term Exam	02		02	
9	Field Work/ Project	02		02	
10	Extracurricular Activity	02		02	
11	Any Other Mode	02		02	
Total (Not more than 10 in each semester)					

Total Internal Marks Obtained.....

Signature of Student...For SEM ...:- .....SEM .....:-.....

Signature of Teacher.....

Date.....

HOD

METHOD FOLLOWS FOR INTERNAL AND EXTERNAL ASSESSMENT OF STUDENTS

UNIT TEST:

Regular class wiser unit tests are held on the portions completed in the class.

SEMINAR:

Classroom seminar by the students are arranged on various selected topics from the syllabus

QUESTION BANKS:

Unit wise/paper wise question banks are prepared for ready reference for the students. Model answer for various question are regularly discussed in the classes.

VIVA:

Oral question answer sessions are arranged during theory as well as practical classes

HOME ASSIGNMENTS:

Occasionally home assignments are given keeping in view the overall pace of progress of the student.

OBJECTIVE TESTS:

Objective tests have been introduced from the session 2012-13 for infusing interest of the students toward the subject and their rapid evaluation

CCE SYSTEM:

A **comprehensive continuous evaluation** are held at the end of each month with the help of various modes like semi surprise test, poster competition, assignments on general topics, seminar on optional topics etc.

DEPARTMENT OF MICROBIOLOGY AND BIOTECHNOLOGY

P.G. DEPARTMENT OF MICROBIOLOGY
NABIRA MAHAVIDYALAYA, KATOL
INTERNAL ASSESSMENT METHADOLOGY

SESSION 2023-24

SUBJECT: - .....

THEORY INTERNAL MARKS

Name of Student.....Roll Number.....

Class.....

Name of Teacher.....

Paper: -

Sr. No.	Mode of Internal Assessment	Maximum Marks allotted	Mark Obtained	Maximum Marks allotted	Mark Obtained
		SEM :-		SEM :-	
1	Attendance and curricular activity	04		04	
2	Seminars	04		04	
3	Assignment	04		04	
4	Unit Test I	02		02	
5	Unit Test II	02		02	
6	Unit Test III	02		02	
7	Unit Test IV	02		02	
8	Term Exam	04		04	
9	Field Work/ Project	04		04	
10	Extracurricular Activity	04		04	
11	Any Other Mode	04		04	
Total (Not more than 20) in each semester					

Total Internal Marks Obtained...SEM.....SEM.....

Signature of Student...SEM.....SEM.....

Signature of Teacher.....

Date.....

HOD

NABIRA MAHAVIDYALAYA, KATOL
INTERNAL ASSESSMENT METHADOLOGY

SESSION 2023-24

SUBJECT: - .....

THEORY INTERNAL MARKS

Name of Student.....Roll Number.....

Class.....

Name of Teacher.....

Paper: -

Sr. No.	Mode of Internal Assessment	Maximum Marks allotted	Mark Obtained	Maximum Marks allotted	Mark Obtained
		SEM -		SEM-	
1	Attendance and curricular activity	02		02	
2	Seminars	02		02	
3	Assignment	02		02	
4	Unit Test I	01		01	
5	Unit Test II	01		01	
6	Unit Test III	01		01	
7	Unit Test IV	01		01	
8	Term Exam	02		02	
9	Field Work/ Project	02		02	
10	Extracurricular Activity	02		02	
11	Any Other Mode	02			
Total (Not more than 10 in each semester)					

Total Internal Marks Obtained.....

Signature of Student...For SEM ...:- .....SEM .....:-.....

Signature of Teacher.....

Date.....

HOD

Department of Botany

Assignments were given to all the odd & even semester students & unit tests were taken for evaluation of University Theory Internal Marks.

Academic Session 2023-24

Department of Botany

Assignments

Academic Session

2022-23

Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 1st Year

Sem - I

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Achal Anil Lokhande	Achal. Lokhande	Achal. Lokhande
2	Aniket Sitaram Rathod		
3	Anjali Devidasji Sembekar	Anjali Sembekar	Anjali Sembekar.
4	Anushka Sunilrao Ingole	Anushka I.	Anushka I.
5	Bharti Devidas Raut	Bharti Raut	Bharti Raut
6	Chanda Ravindra Rathod	C.R. Rathod	C.R. Rathod
7	Chetan Shantaram Rewatkar	Chetan.	Chetan.
8	Chetan Sureshrao Agarkar	C. Agarkar	C. Agarkar
9	Chetna Sunil Bondre	Chetna Bondre	Chetna Bondre
10	Dimple Hemraj Kalbande	Dimple Kalbande	Dimple Kalbande.
11	Dipali Dilip Mahatpure	D. D. Mahatpure	D. D. Mahatpure.
12	Farhatnaz Rasheed Sheikh	Farhatnaz Sheikh	Farhatnaz Sheikh.
13	Gayatri Pundlikrao Ghormade	Gayatri Ghormade	Gayatri Ghormade
14	Harshada Pramod Jagdale	Harshada J.	Harshada J.
15	Janhavi Wasudeo Gharad	Janhavi Gharad	Janhavi Gharad
16	Jayashri Nilesh Gund	Jayashri	Jayashri
17	Kapilansh Sanjay Mahurkar	Kapilansh Mahurkar	Kapilansh Mahurkar
18	Khushali Sahebrao Katlam	Khushali	Khushali

19	Khushbu Meghraj Zode	K.M. Zode	K.M. Zode
20	Khushi Girish Dhonde	K.G. Dhande.	K.G. Dhande.
21	Komal Ramesh Chaudhari	Komal	Komal
22	Krunali Pramod Bodhale	Krunali	Krunali
23	Liteshwari Omkar Bangadkar	L.O. Bangadkar	L.O. Bangadkar
24	Monika Manohar Barai	Monika	Monika
25	Mrunali Chandrashekhar Nagmote	Mrunali Nagmote	Mrunali Nagmote
26	Naina Sajan Thosar	Naina Thosar	Naina Thosar
27	Neha Pramod Channe	Neha.	Neha.
28	Nikhil Sanjay Babulkar	Nikhil.B.Babulkar	Nikhil.B.Babulkar
29	Oshika Harinarayan Ghuguskar	Oshika Ghuguskar	Oshika Ghuguskar
30	Payal Vijay Shrirame	Payal Shrirame	Payal Shrirame
31	Payal Ramesh Taywade	Payal Taywade	Payal Taywade
32	Prachi Raju Nehare	P.R. Nehare	P.R. Nehare
33	Priya Govinda Sirsam	Priya	Priya
34	Rehan Hafeez Sheikh	Rehansheikh	Rehansheikh
35	Riddhi Vijay Kalbande	Riddhi	Riddhi
36	Ruchika Dharmaraj Suryavanshi	R.D. Suryavanshi	R.D. Suryavanshi
37	Rudra Ajay Bisani	Rudra Bisani	Rudra Bisani
38	Rupali Manohar Kadwe		
39	Rushikesh Vinod Satpute	Rushikesh Satpute	Rushikesh Satpute
40	Rutuja Sudhirrao Dharme	Rutuja Dharme	Rutuja Dharme
41	Sakshi Narendra Fuse		

42	Sakshi Suryakant Vyawahare	Sakshi	Sakshi.
43	Saloni Janardhan Manmode	SaloniManmode	SaloniManmode
44	Saloni Suresh Siram	Soloni Siram	Soloni Siram
45	Samruddhi Devendra Yeole	Samruddhi.	Samruddhi.
46	Sanakshi Ishwar Shende	Sanakshi Shende	Sanakshi Shende.
47	Sanskruti Dewanand Meshram	Sanskruti.	Sanskruti.
48	Sanskruti Pravin Dhote		
49	Shraddha Vijay Rewatkar	Shraddha	Shraddha
50	Snehal Udaram Ahake	Snehal Ahake	Snehal Ahake
51	Srushti Ratnakar Dhok	Srushti	Srushti
52	Sudhanshu Yuvraj Amale	Amle	Amle
53	Sumit Krushnaji Konghe	Sumit Konghe	Sumit Konghe
54	Swapnil Shankar Kohale	Swapnil Kohale	Swapnil Kohale
55	Tanvi Gajanan Pande	Tanvi Pande	Tanvi Pande
56	Tejaswini Mohanrao Manmode	Manmode	Manmode
57	Trupti Niranjan Charde	Trupti	Trupti
58	Vaishali Ramesh Chavhan	Vaishali	Vaishali
59	Vishakha Mahesh Uke	Uke	Uke

30/6/23

Page No.

Date : / /

Department of Botany

Nabira Mahavidayalaya Katol

Name :- Dishika Narendra Ginadkar

Sub :- Botany (Sem-I) (I-Year)

Session - 2023-24

Page No.
Date: / /

Living & Non-living characteristics of viruses

Living characteristics	Non-living characteristics
1) Viruses have a protein coat or capsid.	1) They are non-cellular & don't have cell organelles.
2) Viruses exist in intracellular state.	2) Viruses exist in extracellular state.
3) They can replicate by utilize host cell machinery	3) They cannot reproduce by themeselve.
4) Viruses occurs in different strain.	4) They can crystallize & stone for a long time.
5) They can mutate.	5) They lack of enzyme activity.
6) It is infectious agent	6) They do not have metabolic activity of their own.

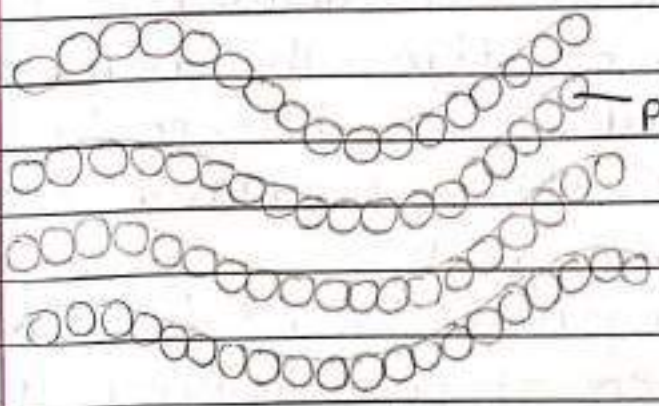
Page No.
Date : / /

Compain te the cell wall of gram positive and gram Negative Bacteria.

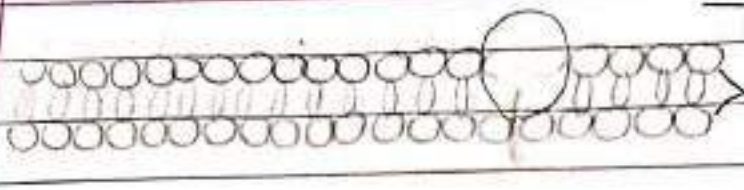
	Gram Positive bacteria	Gram Negative bacteria
1)	The bacteria remain coloured with gram staining even after washing with alcohol or acetone.	1) The bacteria do not retain the stain when washed with alcohol or acetone
2)	outer membrane is absent.	2) outer membrane is present
3)	cell wall is 20-30 nm thick	3) cell wall 8-12 nm thick
4)	The wall is smooth	4) The wall is wavy and comes in contact with plasma membrane only at a few loci.
5)	The lipid containt in the wall is very low	5) The lipid content in the wall is 20-30%
6)	The wall contain 70-80% murein.	6) The wall contain 10-20% muhein.
7)	Porin are absent.	7) Porins or hydrophilic channels occur in outer membrane

8)	Basal body of the flagellum contain two rings.	8) Basal body of the flagellum has four rings.
9)	Mesosomes are quite prominent	9) Mesosomes are less prominent.
10)	A few pathogenic bacteria belong to gram positive group.	10) Most of the pathogenic bacteria belong to gram negative group.
11)	cell wall contain teichoic acids.	11) Teichoic acids are absent
12)	Ex. Actinomyces, Bacillus, Nocardia, listeria, Lactobacillus, corynebacterium, streptococcus, clostridium.	12) Escherichia coli, salmonella, shigella and other. Enterobacteriaceae.

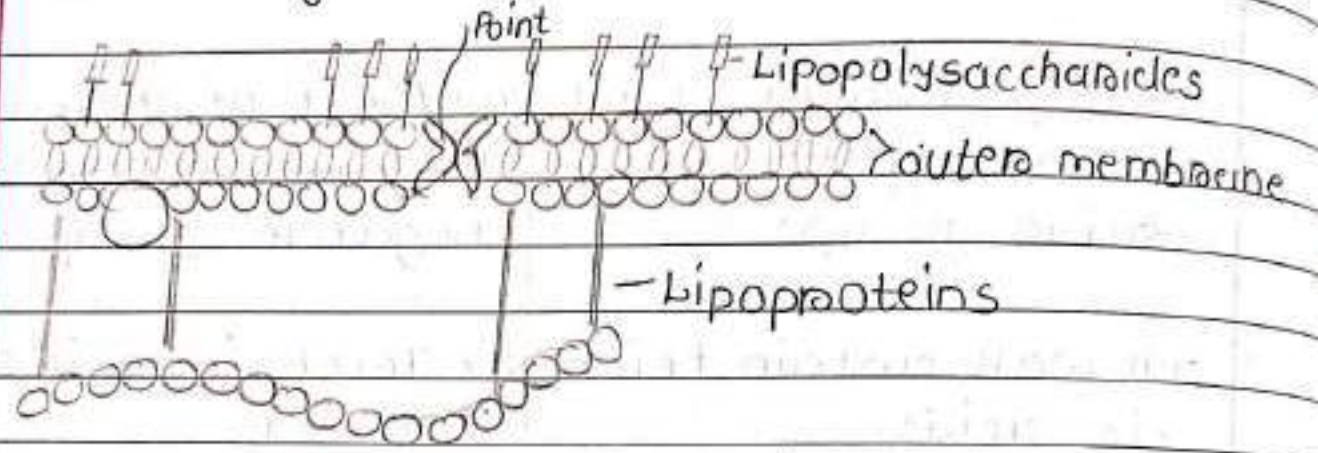
① sketch & label - diagram
1) Gram - positive Bacteria

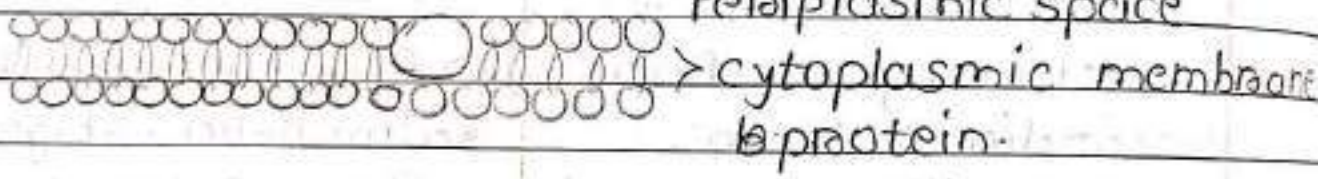


Date : / /



2) Gram - Negative Bacteria





★ Principle and procedure of gram staining

Principle of gram staining :-

The two major groups of bacteria can be divided in gram-positive and gram negative. The gram stain technique is based on the differential structure of the cellular membrane and cell walls of the two groups.

Gram-positive organisms contain a highly cross-linked layer of peptidoglycan that retain the primary dye, crystal violet (CV) following the application of the mordant.

iodine. (1) The iodine and crystal violet from a complex within the peptidoglycon when decolonizer is applied to the cells. the cv-I complex remains within the cell, making it appear dark purple to blue.

The gram-negative organisms do not contain a thick cross-linked layer of peptidoglycan. The peptidoglycon is loosely distributed between the inner cell and the outer cell membrane following the application of the crystal violet and iodine. the cv-I complex are not trapped within the peptidoglycon, Application of the acid-alchohol decolonizer dehydrates in outer cellular membrane, leaving holes in the membrane and effive effective washing are removing the cv-complex from the cells. The cells appear colourless. To make the colorless cell visible a secondary stain. safranin is applied leaving the gram-negative cell pink.

Gram stain Reagents

1) Primary stain :- 2g crystal ~~vio~~ violet 20ml 95% ethyl alchol. 0.8g ammonium oxalate and 100 ml distilled water.

2) Gram's iodine :- 2g potassium iodide. 1g iodine crystals and 100 ml distilled water.

3) Decolonizer :- 50 ml acetone and 50 ml ethanol.

4) counterstain :- 4.0 g safranin, 200 ml ethanol and 800 ml distilled water.

* The procedure of gram staining :-

1) Prepare and fix the specimen to the microscope slide before staining.
2) cover the smear with crystal violet primary stain, for 20 seconds.
3) Gently rinse of the stain with water.
4) Cover the smear with Gram's iodine mordant, for 1 minute.
5) Pour off the excess Gram's iodine.
6) Run the acid-alchohal decolonized over the smear until the solution appears
7) Gently rinse with water.
8) cover the smear with safranin the second or counterstain, for 26 seconds.
9) Gently rinse the strain with water
10) Blot dry with bibulous paper.

Result interpretation of gram stain

- Gram-positive bacteria - Blue / purple colour
- Gram-Negative bacteria - Red/ pink colour.

Bk

Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 1st Year

Sem - II

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Achal Anil Lokhande	Achal . Lokhande.	Achal . Lokhande.
2	Aniket Sitaram Rathod		
3	Anjali Devidasji Sembekar	Anjali Sembekar	Anjali Sembekar
4	Anushka Sunilrao Ingole	Anushka I.	Anushka I.
5	Bharti Devidas Raut	Bharti Raut	Bharti Raut.
6	Chanda Ravindra Rathod	C. R. Rathod	C. R. Rathod
7	Chetan Shantaram Rewatkar	Chetan.	Chetan.
8	Chetan Sureshrao Agarkar	C. Agarkar	C. Agarkar.
9	Chetna Sunil Bondre	Chetna Bondre	Chetna Bondre
10	Dimple Hemraj Kalbande	Dimple Kalbande	Dimple Kalbande
11	Dipali Dilip Mahatpure	D. D. Mahatpure	D. D. Mahatpure
12	Farhatnaz Rasheed Sheikh	Farhatnaz Sheikh	Farhatnaz Sheikh
13	Gayatri Pundlikrao Ghormade	gayatri ghormade	gayatri ghormade
14	Harshada Pramod Jagdale	Harshada P.	Harshada. P.
15	Janhavi Wasudeo Gharad	Janhavi Gharad	Janhavi Gharad
16	Jayashri Nilesh Gund	Jayashri	Jayashri
17	Kapilansh Sanjay Mahurkar	Kapilansh Mahurkar	Kapilansh Mahurkar.
18	Khushali Sahebrao Katlam	Khushali	Khushali

19	Khushbu Meghraj Zode	K. M. Zode	K. M. Zode,
20	Khushi Girish Dhonde	K. G. Dhande	K. G. Dohande.
21	Komal Ramesh Chaudhari	Komal	Komal.
22	Krunali Pramod Bodhale	Krunali	Krunali
23	Liteshwari Omkar Bangadkar	L. O. Bangadkar	L. O. Bangadkar
24	Monika Manohar Barai	Monika	Monika
25	Mrunali Chandrashekhar Nagmote	Mrunali Nagmote	Mrunali Nagmote
26	Naina Sajan Thosar	Naina Thosar.	Naina Thosar
27	Neha Pramod Channe	Neha.	Neha.
28	Nikhil Sanjay Babulkar	Nikhil B. Babulkar	Nikhil. B. Babulkar,
29	Oshika Harinarayan Ghuguskar	Oshika Ghuguskar	Oshika Ghuguskar.
30	Payal Vijay Shrirame	Payal Shrirame	Payal Shrirame.
31	Payal Ramesh Taywade	Payal Taywade	Payal Taywade
32	Prachi Raju Nehare	P. R. Nehare	P. R. Nehare.
33	Priya Govinda Sirsam	Priya	Priya.
34	Rehan Hafeez Sheikh	Rehan Sheikh	Rehan Sheikh.
35	Riddhi Vijay Kalbande	Riddhi	Riddhi
36	Ruchika Dharmaraj Suryavanshi	R. D. Suryavanshi	R. D. Suryavanshi
37	Rudra Ajay Bisani	Rudra Bisani	Rudra Bisani
38	Rupali Manohar Kadwe		
39	Rushikesh Vinod Satpute	Rushikesh Satpute	Rushikesh Satpute.
40	Rutuja Sudhirrao Dharme	Rutuja Dharme	Rutuja. Dharme
41	Sakshi Narendra Fuse		

42	Sakshi Suryakant Vyawahare	Sakshi	Sakshi.
43	Saloni Janardhan Manmode	Saloni Manmode	Saloni Manmode.
44	Saloni Suresh Siram	Saloni Siram	Saloni Siram
45	Samruddhi Devendra Yeole	Samruddhi.	Samruddhi.
46	Sanakshi Ishwar Shende	Sanakshi Shende	Sanakshi Shende
47	Sanskruti Dewanand Meshram	Sanskruti.	Sanskruti.
48	Sanskruti Pravin Dhote		
49	Shreddha Vijay Rewatkar	Shraddha	Shraddha
50	Snehal Udaram Ahake	Snehal Ahake	Snehal Ahake
51	Srushti Ratnakar Dhok	Srushti	Srushti
52	Sudhanshu Yuvraj Amale	Amle	Amle
53	Sumit Krushnaji Konghe	Sumit Konghe	Sumit Konghe
54	Swapnil Shankar Kohale	Swapnil Kohale	Swapnil Kohale
55	Tanvi Gajanan Pande	Tanvi pande	Tanvi pande
56	Tejaswini Mohanrao Manmode	Manmode	Manmode
57	Trupti Niranjan Charde	Trupti	Trupti
58	Vaishali Ramesh Chavhan	Vaishali	Vaishali
59	Vishakha Mahesh Uke	Uke	Uke

Name :- Kaloni J. Manmode

Sub :- Botany (paper I)

class :- CBZ (Bsc 1st year)
Sem II

Date :- 25/04/2024 (2023-24)

UNIT [I]

(1) compression.

• This is the most common type of preservation. In these types, where much of the organic matter of the plant is preserved with the deep impression of the plant the fossile, are referred as compressions.

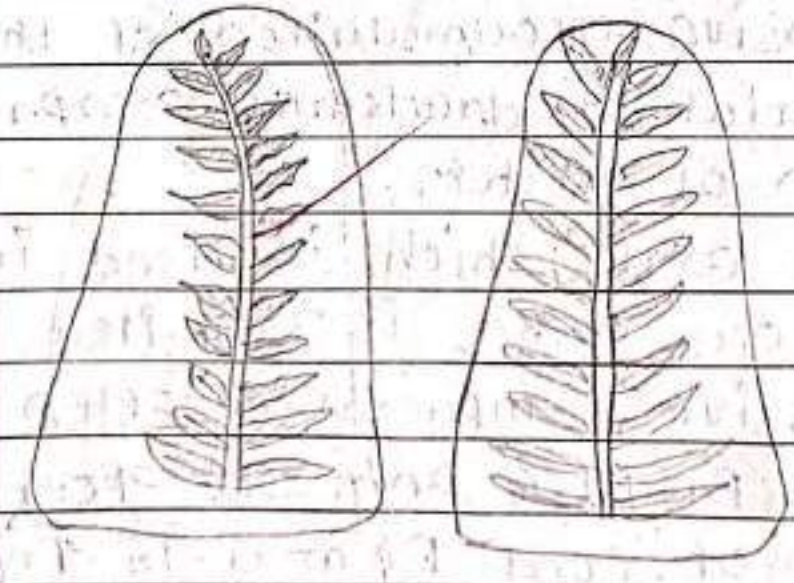
• compression are plant parts that have suffered physical deformation. such that the 3 dimensional plant parts is compressed to more or less 2 dimensions.

• Coal is usually considered to be a complex type of compression. where an extensive accumulation of the plant material is gradually compressed in basin of water.

• The coal which is used in factory and our homes is resulted due to an excessive compression often as much as to produce only one feet thick layer of coal from a 15 feet thick half rotten tree trunk, branches and

leaves.

- compression is excellent Records of external forms, especially for planar structures like leaves.
- compression preserve organic material and because of it carbon isotopic studies can be performed on compression.
- From these studies paleobotanis can sometimes recognize the biochemical signature of C_3, C_4 and CAM photosynthetic physiolog in extict species.



② Impression.

- This impression may be of the surface markings of the plant material or be the marking of the internal cavities in the plant material.
- They are the prints or actually duplicate copy of the plant material on thin soft clay of the soil.
- The surrounding muds get deposited on the surface of the plant material and gets into the cavity and their impression are left.
- During further process the soils turn into hard Rocks bearing the initial impressions prescribed on them by plant parts.
- These are much darker in colour than the surface of the Rock below because it very often Retains some of the organic material.
- Impression are 2 dimensional imprints of plant or their parts found, most commonly in fine grained sedim

ents such as silt or clay.

③ Glossopteris leaf.

1. Morphology of leaf.

• The leaves described under the Glossopteris were present in spiral or whorls probably on short shoot.

• For many years species of Glossopteris leaves were identified on the basis of external form and venation pattern.

• The important features of the leaf is presence of a single prominent midrib from which numerous fine veins pass out to the margin forming a network of dichotomous branching.

• Glossopteris leaves are simple, entire, sessile or very shortly petiolate, linear, lanceolate to spathulate ovate and with a very strong midrib, many species of such leaf fossils

are known the Indian lower Gondwana, viz; Gl. indica, communis, angustifolia, decipens, longicaulis, ampla, reticulifera, browniana, Staicta, tortuosa, Formosa, divergens, conspicua.

• The leaves are 3 to 40 cm long and in some species, whorls of such leaves have been found on thin stems.

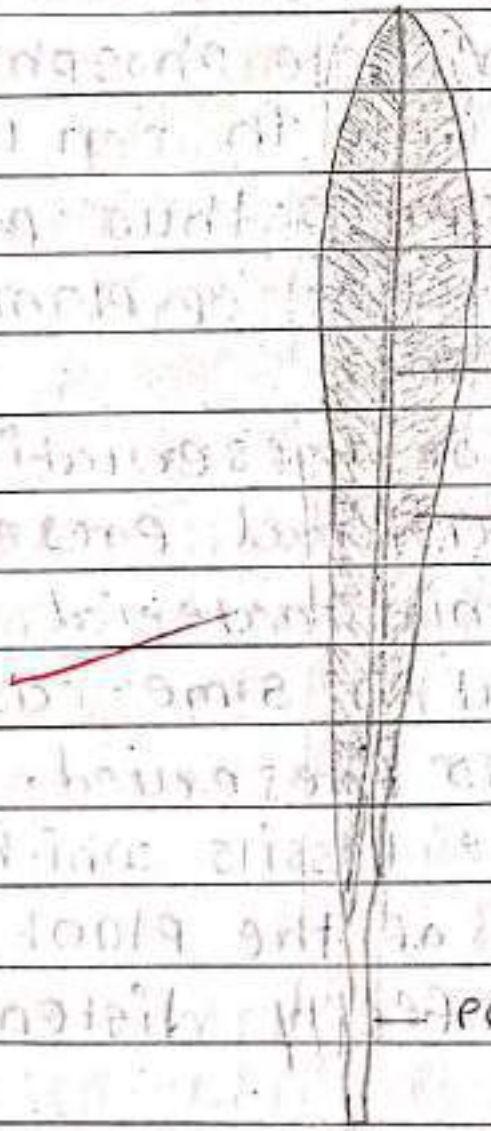
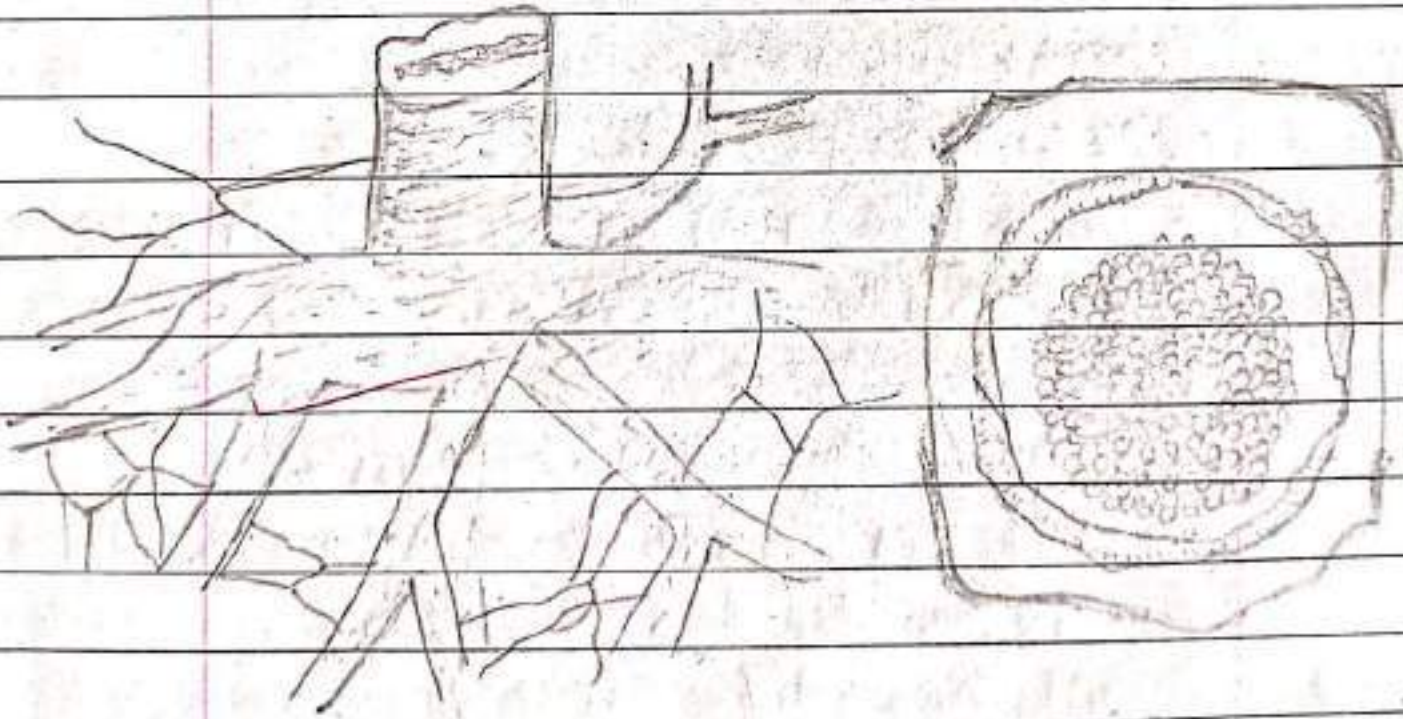


fig:- leaf of Glossopteris indica.

(4) Petrification.

- This is important type of pres
ervation because it gives the ex
rnal morphology along with interna
structure as to study the complete
nature of the plant or plant parts
- Petrification occurs when plant
tissues are infiltered with mi
al Rich solution. minerals common
like silica, carbonate phosphates, su
phates precipitate in cell lumen or
intercellular spaces thus preserving
internal structure of plant parts
in 3 dimensions.
- This types of Preservation is kn
own as "Structural Preservation
Because organic material not only
cell walls but in some cases fine
details is also preserved.
- So "these are fossils which preser
ve every cell of the plant tissue,
each one perfectly distended as
it in life."

• so "these are fossils which preserve every cell of the plant tissue, each one perfectly distended as it in life".
• In this type cell content get destroyed but original cell wall Remain in original form, so the complete structure becomes stone like.
• The fossil form can be studied by cutting its section for their internal details.



(A) (B)

Fig:- (A) Peterification showing external features (B) Internal structure of the peterified stem.

(5) Glossopteris scutum.

A ovulate structure of Glossopteri is called scutum. The ovulate st cture borne on adaxial of a Glossop teris leaf. In this fructification the ovules are arranged on a dors ventral structure called as capitu um or meghasporophyll or cupul

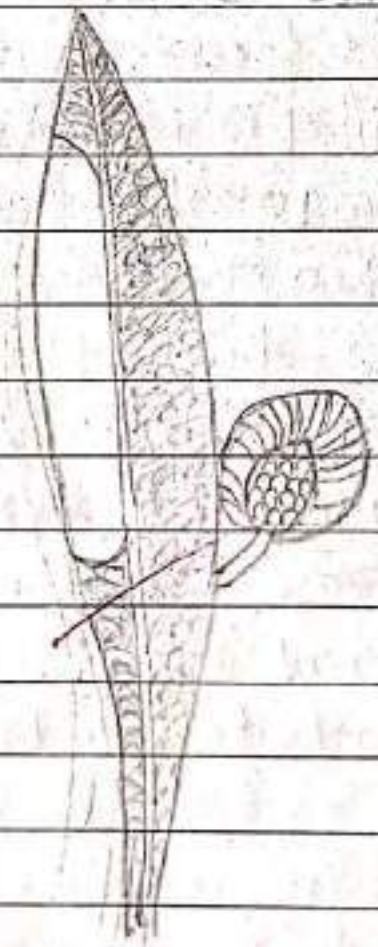


Fig:- Glossopteris female fructific cation scutum.

⑥ Palaeozoic era.

- The Pretcam paleozoic era is divide into 6 periods i.e. Permian, Carboniferous, Carboniferous, Devonian, Silurian, Ordovician and Cambrian.
- Cambrian was so named from Cambria, the latin name for wales, by Adam Sedgwick. He divided the Cambrian strata into three series: lower, middle and upper.
- Ordovician was named it after the tribe ordovices that had occupied northeen wales by Charles Lapworth (1879).
- Roderick Murchison described the strata below the old red standstone and labeled them Silurian, after the tribe Silurs ~~which~~ inhabited the southern part of wales.
- Murchison and Sedgwick (1839) the Devonian system was Recognized on the basis of the strata exposed in Debonshire, England, from which the name Devonian was derived.

• The vegetation of this period includes both aquatic and land plants.
• The first fossils of land plants were found in the silurian and Devonian period of this era (225 350 million years ago).
• Rhynia, Horneophyton and psilophyton were some important genera of silurian and Devonian period.
• Members of lycopsida, sphenopsida and pteropsida formed dense forest in the carboniferous and permian period.
• Such habitat was unsuitable for woody vegetation and in the late Devonian period. The vegetation present on the earth was converted into coal due to geological events.

(7) Mesozoic era.

- Mesozoic era is divided into 3 period i.e. Triassic, Jurassic, and cretaceous periods.
- Triassic system was established by Abel (1834) the Rock strata consisting of Red sandstone and shale.
- Jurassic name is derived from the fine exposures of the Rock strata in the Jura mountains of France by William smith (1797-1815).
- Cretaceous were named by J. de omalius de Halloy (1822), these very peculiar Rock strata consist of chalk.
- The environment of the Triassic period of this era was very arid, thus unsuitable for the growth of plants requiring humid climate. This era is also called as "age of Reptiles" dominated by dinosaurs and pterosaurs.
- Fossils Records, however, indicate the presence of many ferns, cycadophytes

and conifers in the Jurassic period. This period is also known as age of cycads.

- significant changes occurred in the vegetation of the Cretaceous period. It shows that angiosperms formed a considerable part of the Cretaceous vegetation.

(8) ~~Palaeozoic and mesozoic era.~~

pseudo-Fossil

Sometimes it is also happened that a watery solution of various minerals seeped through the sediments; ultimately the sediments may be converted into hard stone or rock. The minerals solution leaves a sort of impression which indicates its path or way which is zig-zag like structures, which sometimes look like impressions of the plants and are often confused as fossil. These are known

as ~~sp~~ pseudo Fossil.

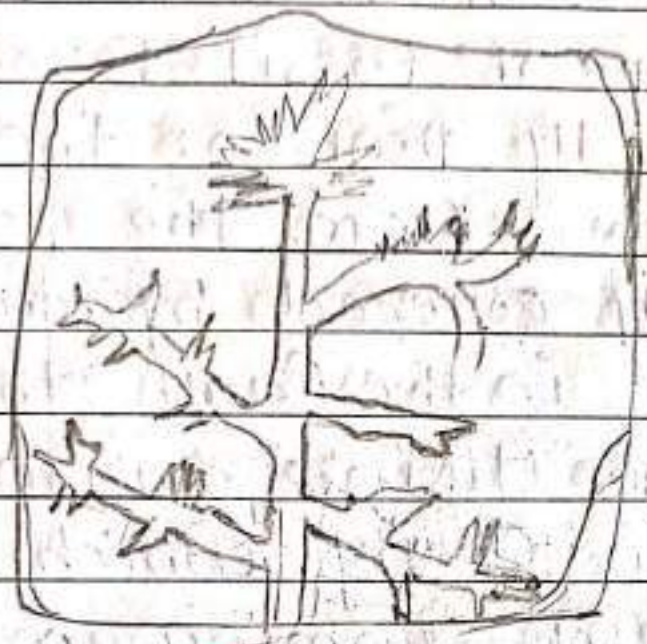
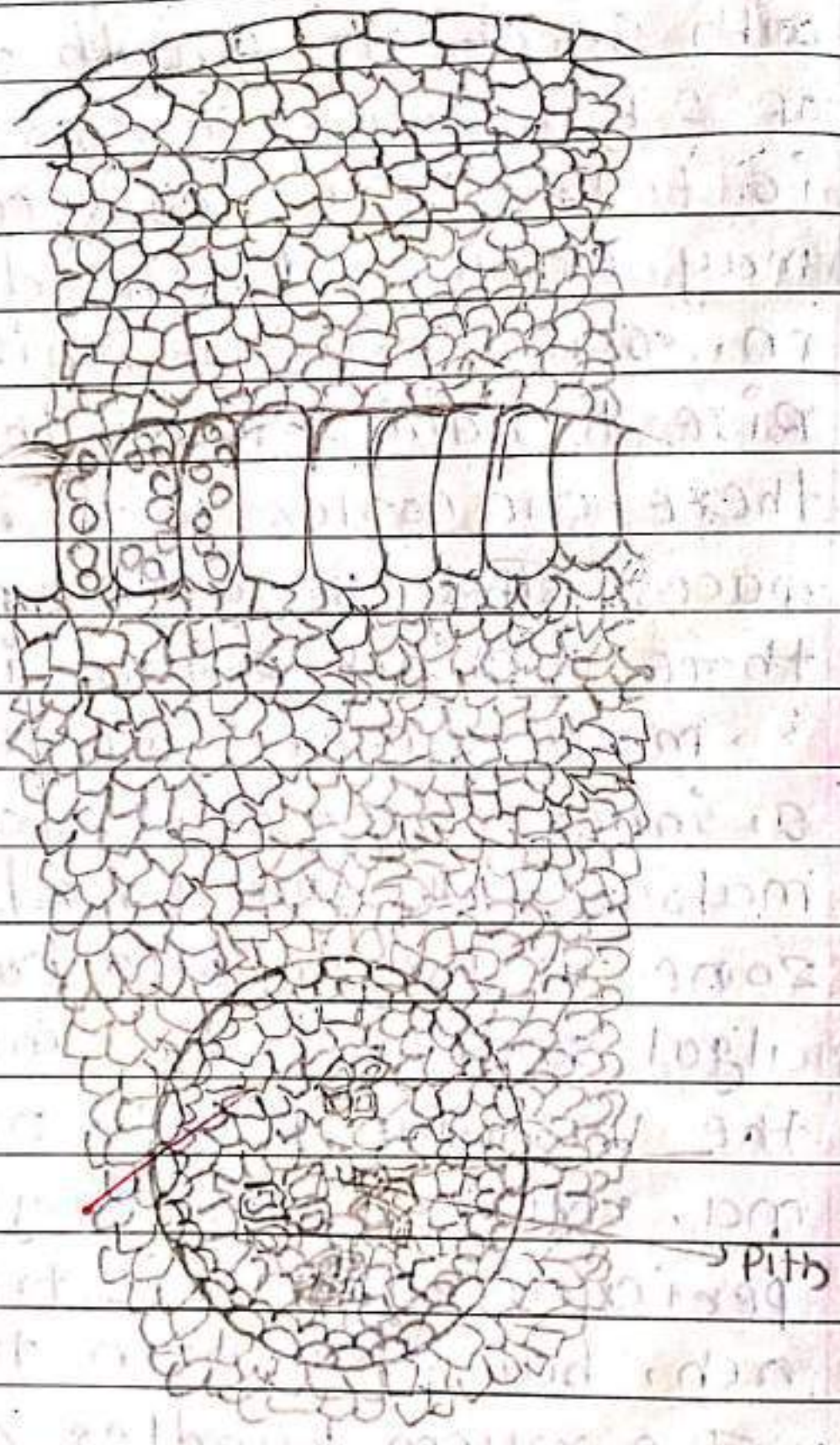


Fig:- Pseudo Fossil

(3) T.S of coralloid root of cycas.
• Epiblema is the outermost tissue with secondary growth and consist of 2 to 5 layers of dead cells. cork is followed by cork cambium which may or may not be distinct later on. • some cells of epiblema give rise to hairs. • Below the epiblema, there are cortex with inter cellular spaces. They are differentiated into three distinct regions, i.e., outer cortex, made-up of compact polygonal cells, inner cortex of thin walled parenchymatous cells and broad blue green zone in the middle cortex called the algal zone. • It lies midway between the vascular bundle and the epiblema. • Next is the single layered pericycle. • stele is triarch or tetrarch, but diarch in the young root. • The xylem bundles are exarch. That is protoxylem towards the outside and metaxylem towards the centre.


Pith

(1) Composition of Soil.

⇒ A typical Soil is about. 50% Solid (45% minerals 5% organic matter) and 50% voids of which half is occupied by water and half by gas. The biological influence on Soil property are strongest near the surface, while the geochemical influences on soil properties increases with depth.

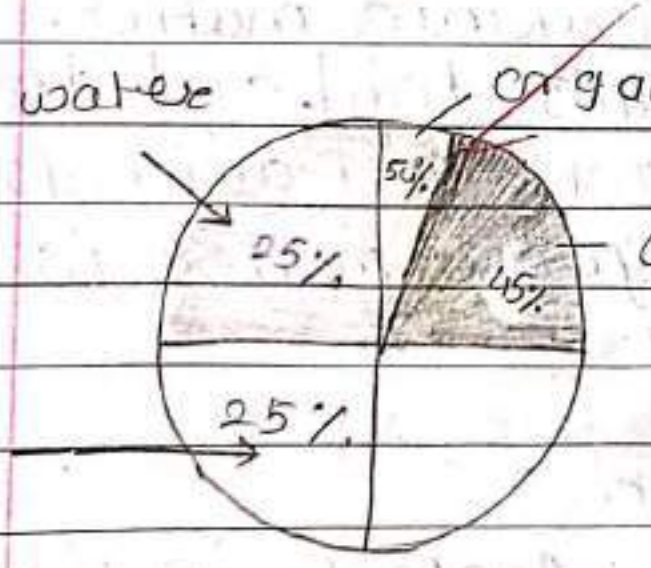
* (1) mineral matter :- The mineral matter is formed of soil particles formed by the weathering of Rocks

(2) ~~Organ~~ organic matter.
It includes dead and decayed parts of plants and animals. The decayed organic matter is known as humans.

(3) Soil water.
The water present in the soil is called soil water.

(4) Soil Air.
Air present in soil pores is called soil Air.

(5) soil organism:- soil organisms refer to various living being inhabiting the soil. and they take part in Breaking down of dead organic matter, Decomposition of dead organisms matter. Mineralization of organic matter loosening the soil.
Clay and humus are special parts of the soil.



- minerals
- Gravel
- Sand
- Silt
- Clay.

Fig:- composition of soil.

(2) function of soil.

⇒ Soil is a major component of the Earth ecosystem, which is important for various, agricultural environmental nature protection landscape, architecture and urban applications. Soil can perform many functions and there include water ecosystem, agriculated and as bore for plants and buildings.

(1) Biomass Production:-

Soil acts an anchor for plant roots. Soil also functions by maintaining the quality of air by allowing CO_2 to escape and fresh O_2 to enter the root zone.

(2) Environmental Interaction.

Soil can filter, buffer and transform materials between the atmosphere the plants cover the water table. Soil interacts with environment waste materials into new materials.

(3) Biological habitat and gene pool:
Soil is environment in which seeds grow. They provide the heat nutrients and water that are available to use to nurture plant and animals. The assistance of soil in the decompositions of dead plants animals and organisms by transforming their can be utilized by other living thing.

(4) Sources of raw materials:
Soil provides raw materials for Human use and impact human health directly. The composition of human food reflects the nature of the soil in which it was growth. Soil is widely used into building materials, roads and highways. Since these structure rest on the soil factors such as its bearing strength. Compressibility stability and strength need to be

Considering considered, also widely used in form of utensils, religious purpose, art, and craft, specialy type treatment / therapy etc.

(3) Factors affecting soil formation.

The soil formation is affected by the following factors.

(1) The porous rocks weather more rapidly than the non — porous rocks.

(2) Along the steeper slopers of rocks, rain water drains off - rapidally and corrodes the rock rapidally. But soil development does not take place the slopes because of erosion.

(3) Moderate rainfall favors for the translocation of minerals from the upper layer to the lower layers. The heavy rainfall causes erosion. The law rainfall is ineffective in minerals transaction.

(4) Law temperature acceleration the

growth of primitive plants on weathered rock particles and favors the humus formation. High temperature reduces the rate of humus formation.

(5) Soil development is more rapid, if the vegetative is luxuriant.

(6) High humidity favors the plant growth and humus formation.

(7) The soil development is more rapid, if the vegetative is luxuriant.

(8) Animales soil and favor for soil development.

(4) Sandly soil and silt soil.

(1) Sandly soil.

The first type of soil is sand. It consists of small paricles of weathered Rock. sandly soil are one of the poorest types of soil for growing plants. because it has

very low nutrients and poor water holding capacity which makes it hard for the plants roots to absorb water. This type of soil is very good for the drainage system. Sandy soil is usually formed by the breaks down on fragmentation of rocks like granite, limestone and quartz.

② Silt Soil.

Silt, which is known to have much smaller particles compared to sandy soil and made up rock and other mineral particles, which are smaller than sand and larger than clay. It is the smooth and fine quality of the soil that holds water better than sand. Silt is easily transported by moving currents and it is mainly found near the Rive, lake and other water bodies. The silt soil is more fertile compared to the other three types

of soil. Therefore, it is also used in agricultural practices to improve soil fertility.

(5) Clay soil and loamy soil.

(i) clay soil.

Clay soil the smallest particle amongest the other two types of soil. The particles in this soil are tightly packed together with each other with very little or no airspace. This soil has very good water storage qualities and makes it hard for moisture and air to penetrate into it. It is very sticky to the touch when wet, but smooth when dried. clay is the densest and heaviest type of soil which does not drain well or provide space for plant roots in plowish.

④ Loamy soil.

Loamy soil the fourth type of soil. It is a combination of sand, silt and clay such that the beneficial properties from each are induced For instance. it has the ability to retain moisture and nutrients hence, it is more suitable for farming. This soil is also refereed to as an agricultural soil as it included an equilibrium of all three types of soil materials being sandy, clay, and silt and it also happens to have humans. Apart from these, it also has higher calcium and PH levels because of its inorganic origins.

⑤ Alluvial soil.

These soil cover the largest area in the country and occupy an estimated area of 50 m/ha in the Indo-Gangetic plain and the

Brahmaputra Valley.

- Alluvial soils of Indo-Gangetic plains is of Recent origin and derived from the deposition of erosion products brought and laid down by different river system.
- Soils are variable in colour depending upon the source of parent material & calcareousness. Texture ranges from very coarse to fine.
- Soil are usually neutral to alkaline in reaction but it may be acidic in reaction in high rainfall zones.
- The alluvium of the Great Plain of India is divided into newer or younger khadar and older bhanger soil because of variation Resulting from biological and Variations.
- They Support more than 40% of the Indians population by

Providing the most productive agricutural land.

- They yield splendid crops of rice, wheat sugarcane tobacco cotton, jute, maize, oilseeds, vegetables and fruits.

⑦ Laterite Soil.

Laterite its usually Reddish or yellowish Red in colour and often has a vesicular structure and is commonly considered to have formed in tropical and sub-tropical climates having an alternative wet and dry season.

- Laterite soil are mostly end products of weathering.
- They are formed under condition of high temperature and heavy rainfall with alternate wet and dry periods.
- Laterite means brick in latin.

The harden greatly on lossing moisture.

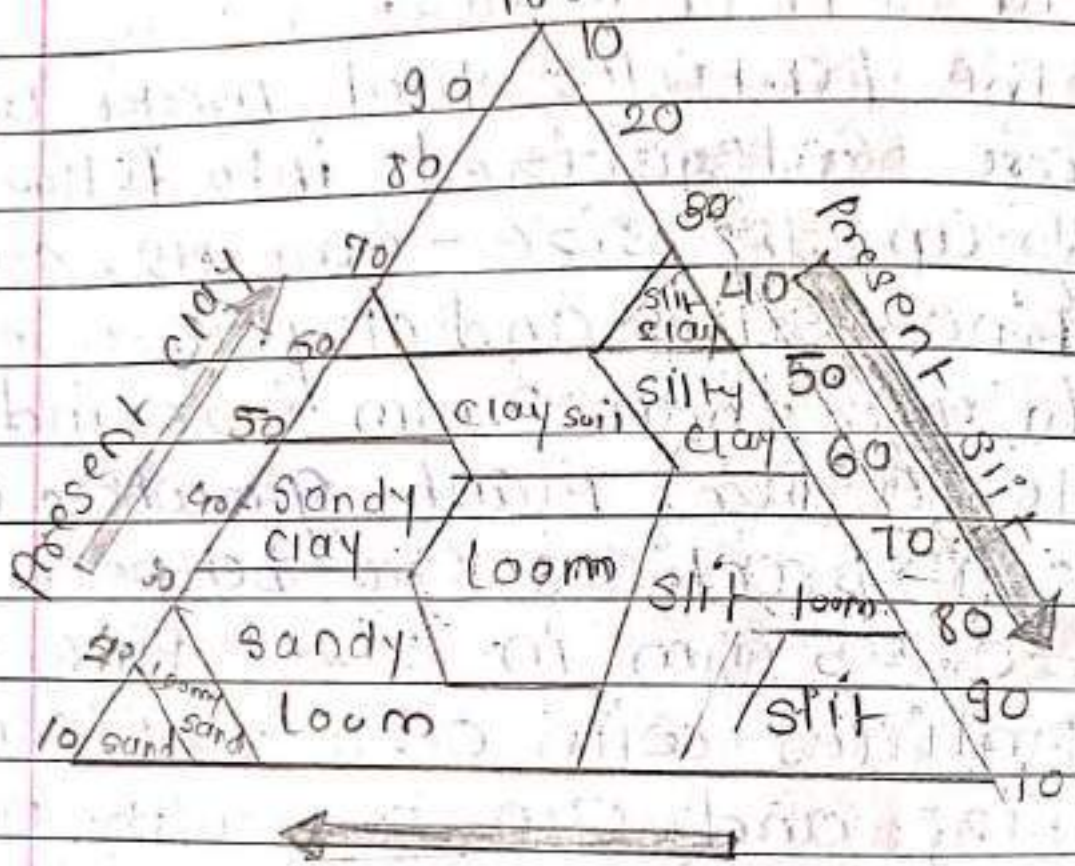
- Laterite soil composed of a mixture of the hydrate oxides of aluminium and iron with small amounts of manganese oxides.
- The soil are widely distributed and usually found in hill tops and plateau of orissa, maharashtra, and malabar hills, west Bengal Kerala, and Tamil Nadu And Assam.
- soil are deeply weathered, high clay content, low bases and silica content, accumulation of sesquioxides and low in organic matter content.

(8) Soil texture.

Soil texture refers to the sense one can feel to touch the soil. It depends upon the size constituent soil particles.

The particles that make up soil are categorized into following groups by size - Gravels, coarse, fine, silt, and clay. Gravels are larger than 2 mm size and unsuitable for plant growth. Coarse soil particles are between 2mm - 0.25 mm in size. Fine sand particles with 0.20 - 0.02 mm in size and can see with naked eye and it improves the diffusion of water and air through soil. Silt soil particles with 0.02 - 0.002 mm and it contains for plant growth. clay in whom individual particles are less than 0.00 2 mm size and it gives plasticity and smoothness to the soil.

Soil texture affects soil behavio
in particular its Retention capa
city for nutrients and water.



Present sand

Present clay

(10) Available phosphorous (P):
Phosphorous is found in the soil in organic compounds and in minerals. The types of phosphorus compounds that exist in the soil are mostly determined by the soil are mostly determined by soil PH and by the type and amount of mineraly in the soil mineral compound of phosphorus usually contain aluminum, iron, manganese of Calcium. soils with inherent pH values between 6 and 7.5 are idea for p-availability:
In acidic soils phosphorus tends to react with aluminum, iron and manganese, while in alkaline soil the dominant fixation in with calcium. Excess of phosphorus mostly interferes with uptake of other elements, such as iron, manganese.

and zinc. symptoms of phosphorus deficiency include stunted growth and dark purple. Colour of older leaves, inhabition, of flowering and root system development.



Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 2nd Year

Sem - III

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Anjali Ramdas Dhongade	A.R. Dhongade	A.R. Dhongade
2	Aparna Gajanan Chinchmalatpur	@Chinchmalapur	@Chinchmalapur
3	Ashwini Yadavrao Kambale	A.Y. kambale	A.Y. kambale
4	Chhakuli Madhav Wadule	chhakuli.	chhakuli.
5	Dhanshri Sanjay Nanote	Dhanshri.N	Dhanshri.N
6	Disha Anilrao Giradkar	D. Giradkar	D. Giradkar
7	Hemlata Rameshwar Kale	Hemlata.kale	Hemlata kale
8	Jayshri Ashok Raut	Jayshri Raut	Jayshri Raut
9	Janhvi Namdev Mehar	Janhvi Meher	Janhvi Meher
10	Kalyani Chhagan Kalbande	Kalyanikalbande	Kalyanikalbande
11	Kalyani Bhaskar Babhulkwr	Kalyani.	Kalyani.
12	Khushali D. Thombre	K. D. Thombre	K. D. Thombre
13	Lakita Umesh Makde	Lakita makde	Lakita makde
15	Madhuri Maroti Sarware	Madhuri	Madhuri
16	Mayuri Pradip Putariya	@MPputaria	@MPputaria
17	Mitali Mahadeo Gajbhiye	Mitali Gajbhiye	Mitali Gajbhiye
18	Neha Narendra Patil	N. Patil	N. Patil
19	Pooja Anil Dambhale	Pooja Dhambale	Pooja Dhambale

20	Prachi V. Dhopre	P. Dhopre	P. Dhopre
21	Pratiksha Dilip Pule		
22	Purva Sheshrao Kharpkar	P. Kharpkar	P. Kharpkar
23	Rajshree Rajendra Rewatkar	R.R. Rewatkar	R.R. Rewatkar
24	Rasika Anandrao Sirsam	R.A. Sirsam	R.A. Sirsam
25	Rasika Keshav Waghe	Rasika	Rasika.
26	Ruchika Pramod Malvi	Malvi	Malvi
27	Rushali Ranjitrao Rampure	Rushali	Rushali
28	Sameer Sheshrao Atram	S.S. Atram	S.S. Atram
29	Samiksha Chandrashekhar Dongre	S. Dongre	S. Dongre
30	Sejal Narendra Wasule	S.N. Wasule	S.N. Wasule.
31	Sharwari R. Somkuwar	S.R. Somkuwar	S.R. Somkuwar
32	Shivani Prabhakar Mohankar	S.P.M	S.P.M
33	Shivprasad Pandharinath Surya	Shiv	Shiv
34	Tina Sandip Yelekar	T. Yelekar	T. Yelekar
35	Vaishnavi Liladhar Nibude	Vaishnavi	Vaishnavi

Page No.
Date : 30/10/2023

NABIRA MAHAVIDYALAYA KATOL

NAME - VAISHNAVI NIMBUDE

SUB - BOTANY

CLASS - CBZ (B.Sc - 2nd year
SEM - III)

2023 - 24

Semester III

Paper - I

Botany

Unit - I

1. Write on:

a) Benettitalean theory of angiosperm origin.

:- • Weiland (1906) and Arber and Parkin proposed the Bennettitales, the extinct group of gymnosperms related to Cycadophyta, to be the possible ancestors of angiosperms. It was furthur supported by Haller and Hutchinson (1959).

• This theory is also called as Anthostrobillus theory and according to this theory the angiosperm flower is interpreted as being derived from an unbranched bisexual strobilus bearing spirally arranged ovulate and pollen organs, similar to the bisexual reproductive structures of some extinct bennettitalean.

• The benettitales includes plants which were common throughout the Mesozoic.

• The fossil specimens reveal that the plant body resembled with living cycads, Some have stout trunks; but all crowned

with cycad-like leaves. The most remarkable structure is Strobilus (cone).

- The cones are borne on lateral shoots instead of the stem tip as among the cycads. Each cone or Strobilus consists of a central axis covered with megasporophylls (carpels), each bearing an ovule; around this is a whorl of compound microsporophylls (stamens); and around the whole is a covering of scaly leaf-like structures, perhaps the forerunners of calyx and corolla.
- The above arrangement of parts in the Strobilus is so much like that of the more primitive angiosperm flower that has suggested that bennettitales may be ancestral to the modern angiosperm.
- The resemblance of the flower of Mangnolia to the cone of Cycadoidea is close enough to make this conclusion plausible, but the vegetative bodies of the two groups are very unlike.
- Arber and Parkin suggested a theory based on hypothetical Cycadeoid flower. Cycadoidea had reproductive organs that were superficially like the flower

of an angiosperm, with an elongate receptacle bearing perianth-like bracts and a whorl of pollen-bearing microsporophylls below an oruliferous region. Comparison were drawn with the flower of Magnolia.

b) Sahanianthus flower.

:- • The form genus Sahanianthus combines characters of families Lythraceae and Sonneratiaceae of order Myrtales.
• It is petrified angiospermic flower.
• Age and locality of the fossil belonging to Pliocene epoch of the Tertiary period of Cenozoic era.
• It is obtained from the Deccan Intertrappean beds of Mohgaon kalan, Chhindwada district, Madhya Pradesh.
It has been described by Prof Shukla (1944) and Chitley (1950-1955)
• The name Sahanianthus given by Prof. Shukla in the memory of Prof. Birbal Sahani.

Description:

1. Flower: The flower was 7 to 10.5 mm long and 1.3 to 3 mm broad, actinomorphic, pedicillate, hypogynous, ebracteate, and bisexual.

2. Pedicel : Flowers are pedicillate.
3. Calyx : 7-8 lobed, tubular, gibbous at the base, valvate aestivation.
4. Corolla : Not observed in original specimens but according to Paradkar and Senad petals are 7-8 lobed arising from between the sepal loked, valvate aestivation.
5. Androecium : 8-12 Stamen, epipetalous, dorsifixed attatchment, protandrous Stamen. Pollen grains were Spherical 40 micron in diameter.
6. Flowers do not show heterostyle but the pistil is in different stages of development.
7. Gynoecium : They possess Syncarpous, Superior ovary with 6-12 locules, axile placentation, ovules present in two rows of each locules. Style is simple and long, broad and sticky Stigma Swollen papillose.
8. Nectary : A single Scale like structure present in gibbous portion of the calyx tube at the base of the ovary Stalk.

9. Pollination : Entamophillous (by insect).
10. Fruit : Loculicidal, capsule.
11. Inflorescence : The flower borne on a branched pedicel.

3. Phytochemistry:

Phytochemistry means chemical based taxonomy. Data from chemistry of plant products is termed phytochemistry. Chemical systematic is the study of chemical variation in various organisms and their relationships. It is used in developing classifications or in solving taxonomic problems. It is also called chemotaxonomy, chemical plant taxonomy or plant chemotaxonomy.

The principles, procedures and results of investigations into chemical variation of plant groups are applied mainly for two purposes. First, to provide taxonomic characters which may improve existing plant classification, i.e. a strict taxonomic purpose, and second, to add to the knowledge of phylogeny or evolutionary relationship.

4. Indented and bracketed keys.

:- • Indented key:

1. Gynoecium of free carpels usually many
   2. Plants terrestrial.
      3. Leaves simple
         4. Leaves stipulate; sepals and petals usually coloured and imbricate fruit dry Magnoliaceae.
         4. Leaves exstipulate; sepals and petals usually green and valvate, fruit fleshy Annonaceae, Rosaceae, Nelumbonaceae.
      3. Leaves pinnately compound
   2. Plants aquatic
1. Gynoecium of united carpels or carpel solitary.

• Bracketed key

1. Gynoecium of free carpels; carpels usually many... Gynoecium of united carpels or carpels solitary
2. Plants terrestrial 3
   Plants aquatic Nelubonaceae
3. Leaves simple 4
   Leaves pinnately compound Rosaceae
4. Leaves stipulate; sepals and petals often coloured and imbricate.
   fruit dry Magnoliaceae
   leaves exstipulate; sepals and petals usually green and valvate;
   fruit fleshy Annonaceae

Date:

5. Cytotaxonomy

Cytotaxonomy means cytological based taxonomy. Cytotaxonomy is the utilization of cytological characters and phenomena for the elucidation of taxonomic problem. Solbrig (1968) discovered two aspects.

i) Number, Shape and size of chromosome

ii) The behaviour of chromosomes during meiosis, and to lesser extent, their behaviour during mitosis.

Chromosome number: The great diversity of chromosome numbers and their relative constancy within population and species provide an important chairacters for taxonomic groupings of large number of plants.

1) Constant number: Certain groups of vascular plants possess a constant number of chromosome in genera such as Pinus and Quercus have $n=2$ chromosomes.

2) Euploidy: In the genus Taraxacum (Compositae), there are species with $2n=16$, 24, 32, 40 and 48 chromosomes. Other examples are Malvaceae, Chlorophylum, Nasturtium officinale.

3) Aneuploidy: In nature, a large number of plant groups are known to exhibit

aneuploidy. Various species of Carex show a wide range of chromosome number from n=6 to 112 with multiples of 5, 6, 7 and 8. Other examples are Dahlia, Crepis, Fritillaria Allium, Nicotiana, Datura, Maize etc.

Chromosome Size: The chromosome size has been very useful in understanding relationship in several taxa. In most plants, the length of a chromosome varies from 0.5 to 30μ. Among monocots the members of Zingiberaceae possess small chromosomes, of Iridaceae: Small to medium sized, of Amaryllidaceae large-sized; while those of Liliaceae possess chromosome of varying sizes. Except Eleocharis and Fimbristylis, all the members of Cyperaceae possess extremely small chromosomes.

Structure of chromosome: Usually the chromosome are characterized as median, sub-median, sub-terminal or terminal with reference to their length and the position of the centromere. The centromere location marks the position of the primary constriction.

Additional constrictions are called secondary constrictions. Occasionally, a secondary constriction may be present near the terminal end of a chromosome, separating its small segment called satellite. The chromosome may be present near the terminal end of a chromosome, separating its small segment called satellite. The chromosome may be symmetrical or asymmetrical. Symmetrical ones possess two equal arms and a median centromere. Asymmetrical ones possess unequal arms and sub-terminal centromere. Relative length of the arms of the chromosome, position of the centromere, presence of satellite, etc. is some characters of taxonomic significance.

Behaviour of chromosome during meiosis:
These characters have been shown to be useful in taxonomy at all levels up to that of the family and even above, but most involve species and groups of species. Degree of sterility and occurence of hybridization are determined by the behaviour of chromosomes during meiosis.

6) Techniques of herbarium

A herbarium is a collection of preserved plant specimens and associated data used for scientific study.

The specimens may be whole plants or plant parts; these will usually be in dried form mounted on a sheet of paper but, depending upon the material, may also be stored in boxes or kept in alcohol or other preservatives. The specimens in a herbarium are often used as a reference material in describing plant taxa; some specimens may be types.

Matching with the need to identify the specimens, it is essential to include in a herbarium sheet as much of the plant as possible, or at least representative parts of them in the case of large specimens. To preserve their form and color, plants collected in the field are carefully arranged and spread flat between thin sheets, known as flimsies, and dried usually in a plant press, between blotters or absorbent paper.

1. Floral structure of Poaceae.

Inflorescence is terminate to the culm and its branched. The basic unit of the inflorescence is spikelet. Spikelet are sessile or pedicelled. Each spikelet consist of a very short or minute axis bearing two opposite rows of branches generally two lower bracts are sterile and are called as sterile glumes. The sterile glumes are followed by lemma or fertile flowering plants. A structure is present between fertile glume and rachilla called palea. Lemna and Palea bear a flower in their axil. Flowers are small, incospicous, bisexual or sometime unisexual. Perianth is highly modified. Androecium consists of three stamens. Filaments fee and delicate. Dithecus.

Gynoecium: It is monocarpelary with superior ovary.

Fruit and seed: Fruit is mostly one-seeded, Caryopsis some time fruit is berry of nut type.

Pollination and dispersal: Grasses are self or wind pollinated. Large feathery stigmas. The seeds which are very small and light are usually distributed by wind.

Date :

b) Floral characters in Asclepiadaceae.

Flower : Bracteate, pedicellate, complete, actinomorphic, hermaphrodite, pentamerous, hypogynous and cyclic.
Calyx : Sepals 5, polysepalous, valvate.
Corolla : Petals 5, gamopetalous, petals are only basally connate, twisted and brightly coloured.
Androecium : Stamens 5, fused with stigma to form a pentangular gynoecium. Each stamen is represented by two pollina with their retinaculae. The pollinia of the with their retinaculate. The pollinia of the adjacent anthers are joined by their retinaculate to carpusculum in a groove to form a unit known as translator. A coronary outgrowth is present at the back of the each stamen.
Gynoecium : Bicarpellary, ovaries superior and free, style and stigma are fused placentation marginal, ovules many per locule.
Fruit : Etario of follicle
Flower formula : Br, ⊕ ♀, K5, C(5), A(5) $\underline{G}_2$

c) Capitulum inflorescence.

A head (capitulum) is a short dense spike in which the flowers are borne directly on a broad, flat peduncle, giving the inflorescence the appearance of a single flower as in dandelion.

e) Floral characters of Asteraceae.

Inflorescence is of racemose type. It is called head or capitulum inflorescence. It is surrounded by bracts. Head may be solitary or compound. Flowers are borne on flat receptacle. Flowers are florets. Two types of flowers are present outer flowers present on the border of receptacle called ray florets while rests of the flowers are called disc floret. The flowers are actinomorphic or zygomorphic, bisexual or unisexual, pentamerous epigynous. Calyx reduces to hair like structure called pappus. Petals 5 gamopetalous filaments free but anthers fused. Anthers bithecous introse. Gynoecium - carpels 2, ovary inferior unilocular with single basal anatropous ovule. Style bifid / bilobed.

Date:

f) Economic importance of Poaceae.

- Triticum aestivum : It is a principal staple food of man. The straw is fed to livestock, also used for paper making.
- Oryza Sativa : It is staple food for millions. The paddy husk is used as fuel, for making hardboard, for alcohol.
- Zea mays : It is used in more diversified ways than any other cereal grains used for livestock. as food.
- Hordeum vulgare : It is used mainly feed grain. Also used in manufacture of several alcoholic beverages.
- Sorghum vulgare : The grains mainly used for poultry and cattles.
- Bomboos : These are tall grasses used for variety of perposes.

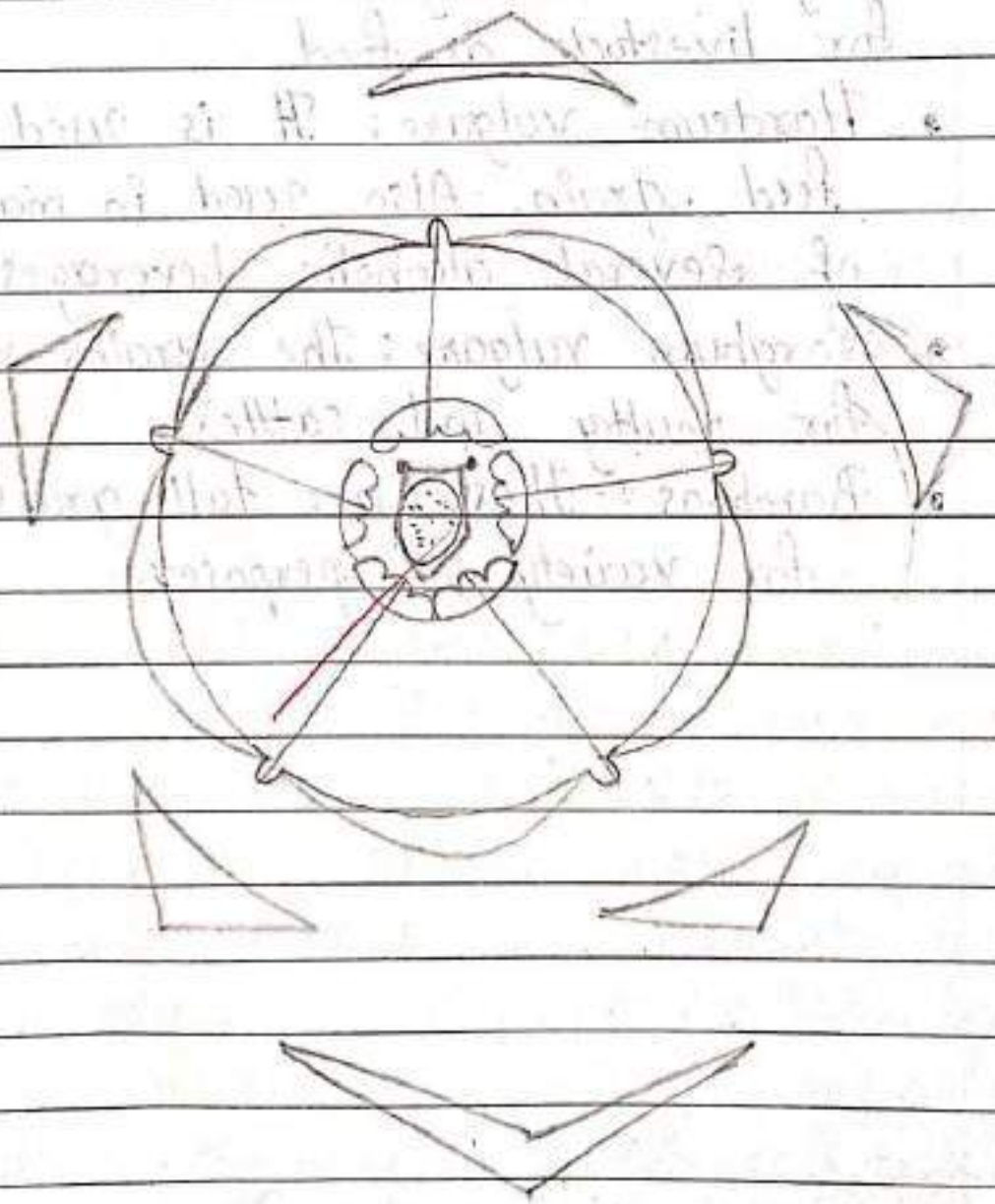
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Q. Write short notes on:

a) Floral formulae and floral diagrams in Asteraceae.

Floral formula :

$Br, \oplus, \male, K_5, K_{pappus}, \overbrace{C_{(5)}\ A_{(5)}}\ \underline{G_2}$



Floral Diagram

c) Economic importance of Asteraceae.

1) Lactusa sativa: It is cultivated as a salad crop.

2) Helianthus tuberosus: Used as a food for man.

3) Helianthus annuus L: (Sunflower) is cultivated for seeds which are source of edible oil.

4) Carthamas tinctorius: (Safflower kusum) is an important oil seed crop plant in India.

5) Tagets minuta: Yield a strong aromatic essential oil which is used as antiseptic; a fly repellent.

6) Crysanthemum: Yield a commercial insecticide pyrenthrum.

e) Spikelet inflorescence.

A Spikelet, in botany, describes the typical arrangement of the flowers of grasses, sedges and some other Monocots. Each Spikelet has one or more florets. The Spikelets are further grouped into panicles or spikes. The part of the spikelet that bears the florets is called the rachilla.

f) cyathium inflorescence.

A cyathium is one of the specialised pseudanthia forming the inflorescence of plants in the genus Euphorbia. A cyathium consists of : five bracteoles. These are small, united bracts, which form a cup-like involucre. Their upper tips are free and in the beginning cover the opening of the involucre.

g) Economic importance of Poaceae.

- Triticum aestivum : It is a principal staple food of man. The straw is fed to livestock, also used for paper making.
- Oryza sativa : It is staple food for millions. The paddy husk is used as fuel for making hardboard for alcohol.
- Zea mays : It is used in more diversified ways than any other cereal grains used for livestock as food.
- Hordeum vulgare : It is used mainly feed grain.

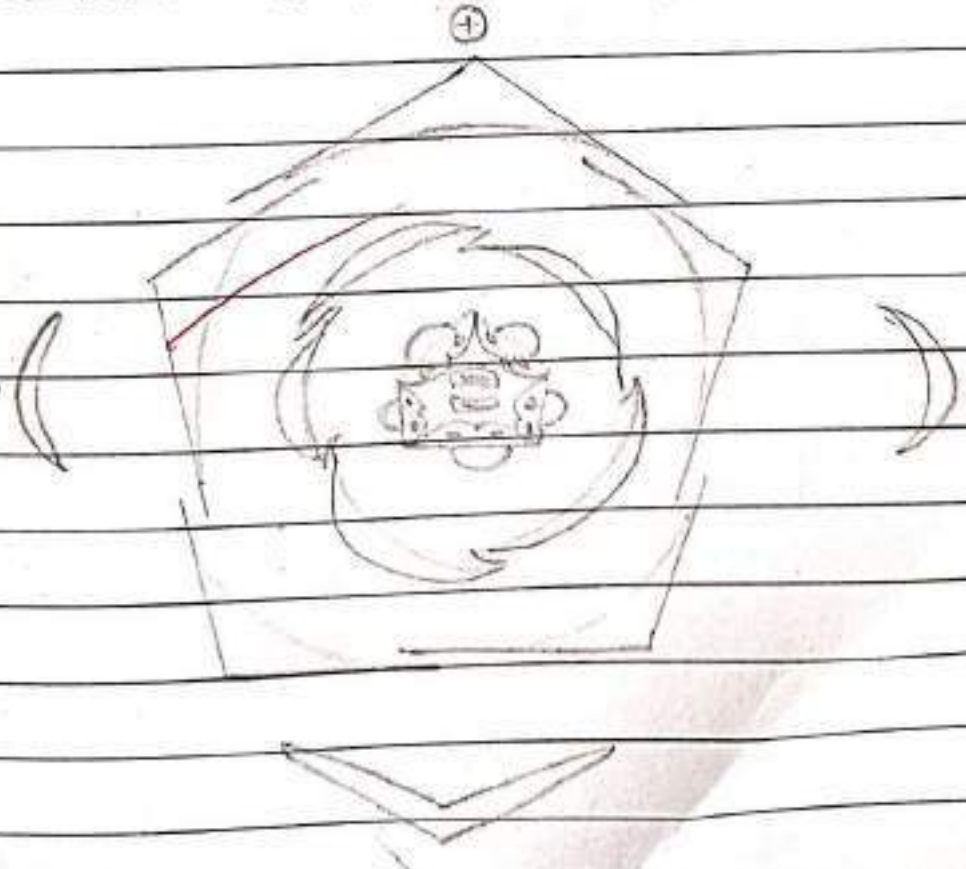
- Sorghum vulgare: The grains mainly used for poultry and cattles.
- Bomboos: These are tall grasses used for variety of perposes.

b) Pollinia

A coherent mass of pollen grains that is the product of each anther lobe of some flowers, especially orchids. Single or paired pollinia are often attatched to, and carried by pollinating insects

i) Floral formula and floral diagram in Asclepideaceae.

Formula :- $Br, br_{\infty}, \oplus \, ♂ \, K_{(5)}, C_{(5)}, A_{(5)}, \underline{G_2}$



j) Disc floret.

Any of a number of small tubular and usually fertile florets that form the disc. In rayless plants such as the tansy the flower head is composed entirely of disc florets.

BK



Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 2nd Year

Sem - IV

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Anjali Ramdas Dhongade	A.R.Dhongade	A.R.Dhongade
2	Aparna Gajanan Chinchmalatpur	A.Chinchmalatpur	A.Chinchmalatpur
3	Ashwini Yadavrao Kambale	A.Y. Kambale	A.Y. kambale
4	Chhakuli Madhav Wadule	Chhakuli.	Chhakuli.
5	Dhanshri Sanjay Nanote	Dhanashri-N	Dhanshri.N
6	Disha Anilrao Giradkar	D.Giradkar	D.Giradkar
7	Hemlata Rameshwar Kale	Hemlata kale	Hemlata kale
8	Jayshri Ashok Raut	Jayshri Raut	Jayshri Raut
9	Janhvi Namdev Mehar	Janhvi Meher	Janhvi Meher
10	Kalyani Chhagan Kalbande	KalyaniKalbande	Kalyanikalbande.
11	Kalyani Bhaskar Babhulkwr	Kalyani.	Kalyani.
12	Khushali D. Thombre	K.D Thombre	K. D Thombre
13	Lakita Umesh Makde	Lakitamakde	Lakitamakde
15	Madhuri Maroti Sarware	Madhuri	Madhuri
16	Mayuri Pradip Putariya	M.Putariya	M.R.Putariya
17	Mitali Mahadeo Gajbhiye	MitaliGajbhiye	MitaliGajbhiye
18	Ncha Narendra Patil	N. Patil	N. Patil
19	Pooja Anil Dambhale	PoojaDambhale	Pooja Dambale.

20	Prachi V. Dhopre	R. Dhopre	R. Dhopre
21	Pratiksha Dilip Fule		
22	Purva Sheshrao Kharpkar	P. Kharpkar	P. Kharpkar
23	Rajshree Rajendra Rewatkar	R.R. Rewatkar	R.R. Rewatkar
24	Rasika Anandrao Sirsam	R.A. Sirsam	R.A. Sirsam
25	Rasika Keshav Waghe	Rasika	Rasika.
26	Ruchika Pramod Malvi	Malvi	Malvi
27	Rushali Ranjitrao Rampure	Rushali	Rushali
28	Sameer Sheshrao Atram	S.S. Atram	S.S. Atram
29	Samiksha Chandrashekhar Dongre	S. Dongre	S. Dongre
30	Sejal Narendra Wasule	S.N. Wasule	S.N. Wasule.
31	Sharwari R. Somkuwar	S.R. Somkuwar	S.R. Somkuwar
32	Shivani Prabhakar Mohankar	S.P.M	S.P.M
33	Shivprasad Pandharinath Surya	Shiv	Shiv
34	Tina Sandip Yelekar	T. Yelekar	T. Yelekar
35	Vaishnavi Liladhar Nibude	Vaishnavi	Vaishnavi

INDEX

Name : Samiksha Chandrashekhar Dongare.

Std. : BSc 2nd yr Div. : IV sem Roll No. :

Sub. : Botany

School / College : Nabira mahavidyalaya katol.

24/04/2024

No.	Date	Subject	Page No.	Sign.

Assignment

PAGE No. / /

UNIT-I CELL ORGANIZATION

1) Endoplasmic reticulum :-

- Endoplasmic Reticulum is a network of membranous tubules present within the cytoplasm of a eukaryotic cell.
- The endoplasmic reticulum is a part of a transportation system of the eukaryotic cell.
- endoplasmic reticulum, a name derived from the fact that in the light microscope it looks like a "net in the cytoplasm"
- The name "endoplasmic reticulum" was coined in 1955 by Porter, who, in 1945 had observed it in electron micrographs of liver cells.

- Morphology :- Morphologically the endoplasmic reticulum is composed of following three kinds of structures.

(1) Cisternae :— The cisternae are long, flattened, sac like unbranched tubules having the diameter of 40 to 90 mu. They remain arranged parallel in bundles or stakes.

(2) Vesicles :- The vesicles are oval membrane bound vacuolar structure having the diameter of 2.8 to 5.30 mu. They often remain isolated in the cytoplasm and occur in most cells but specially abundant in the Pancreatic cells.

(3) Tubules :- The tubules are branched structures, forming the reticular system along with the cisternae and vesicles. They usually have the diameter from 50 to 90 mu and occur almost in all cells.

- **Ultrastructure :-**

The cavities of cisternae, vesicles and tubules of the endoplasmic reticulum are bounded by a thin membrane of 50 to 60 A° thickness. The membrane of endoplasmic reticulum is trilaminer and has fluid mosaic configuration like the unit membrane of the plasma membrane. thus is composed of a bilayer of phospholipids in which "flat" Proteins of various sorts.

- The membrane of endoplasmic reticulum remains continous with the membranes of plasma membrane nuclear bodne and Golgi complex. The cavity of the endoplasmic reticulum is well developed and acts as a passage for secretory products palad (1956) has observed secretory granules in the type of endoplasmic reticulum.

- **Type of endoplasmic reticulum :-**

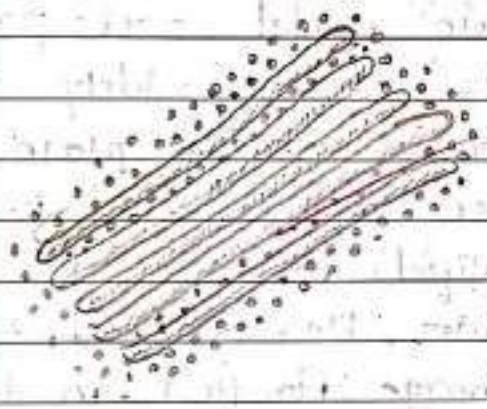
There are two morphological types of ER - the rough or granular (Ergastoplasm) and the smooth or agranular do the presence of ribosome These are interconvertible.

- **Function :-**

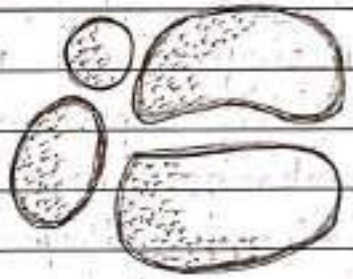
① The endoplasmic reticulum is the site of section of secretory Proteins. Proteins are synthesized on the ribosomes and enter the cisternae through channels in the membrane.

PAGE No.
DATE / /

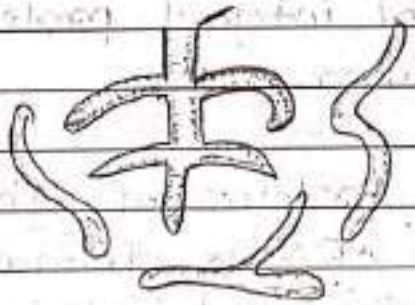
(2) It is also associated with the synthesis and break-down of fatty acids and glycogen.
(3) ER is the major site of synthesis of cholesterol and steroid hormones.
(4) It Provides additional mechanical support of Cytoplasm
(5) Exchange between the nucleus and cytoplasm takes place through nucleus openings which communicate with the endoplasmic reticulum (watson 1959)
(6) The ER also provides an extensive internal surface for exchange of material between the matrix of cytoplasm and the lumen of cisternae.



cisternae



Vesicles



Tubules

DATE / / /

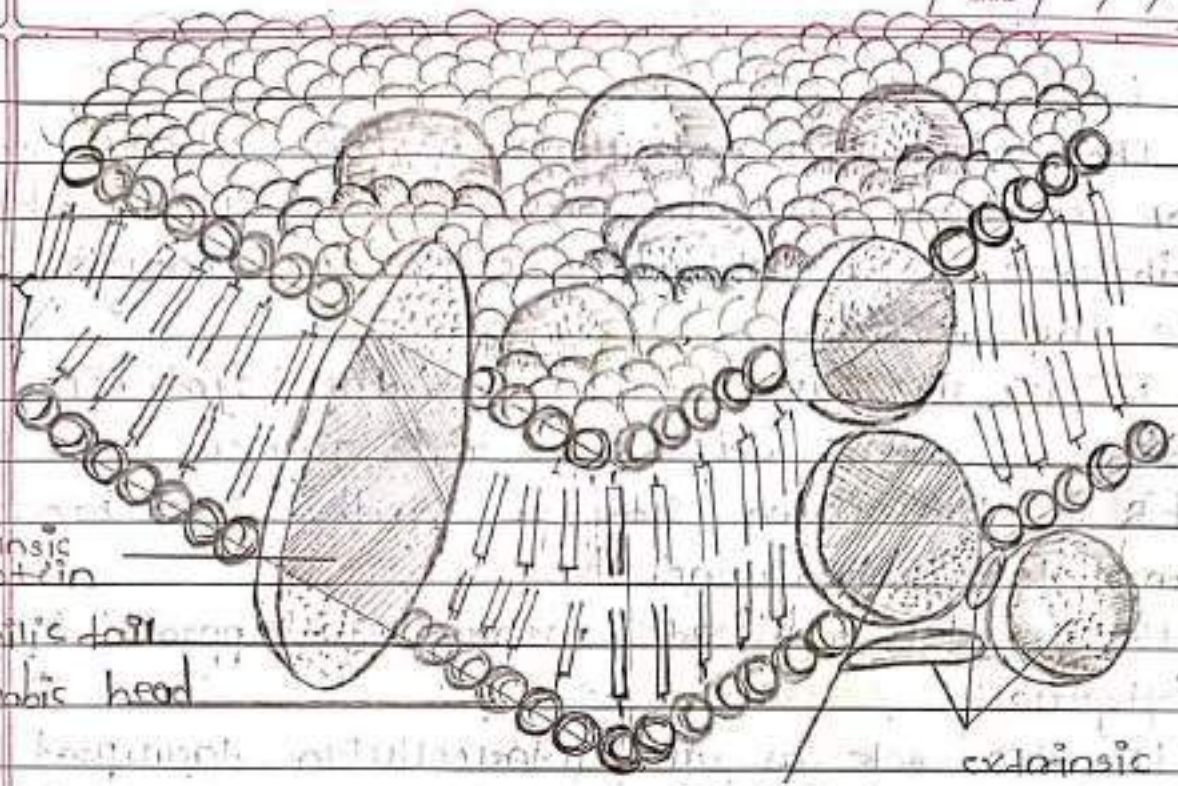
2) Fluid Mosaic Model :-

- The fluid mosaic model postulates (i) that the lipid and integral Proteins are disposed in a kind of mosaic arrangement and (ii) the biological membrane are quasi - fluid structures in which both the lipid and integral Proteins are able to perform translational movements within the overall bilayer. The fluidity of the membrane is the result of the hydrophobic interaction between lipids and Proteins.

The fluid mosaic model was propounded by singer and nicolson, (1972) is now widely accepted as best explaining the properties of the plasma membrane. This model assumes that there is a continuous bilayer of phospholipid molecules in which are embedded globular proteins. Here the Protein have been compared to iceberge floating in the sea of the Phospholipid bilayer. Thus the plasma membranes are considered to be quasifluid structure in which lipids and integral proteins are arranged in a mosaic manner.

- The globular Proteins of the membrane are considered to be of two different types. extrinsic (peripheral) proteins and intrinsic (integral) proteins.

- The peripheral Proteins are soluble readily dissociated from the plasma membrane and are entirely outside of the lipid layer.



The fluid mosaics model of plasma membrane

- The integral proteins are relatively insoluble and penetrate either surface of the lipid bilayer.
- The integral proteins are amphipathic with hydrophidic polar heads protrude from the surface of the membrane.
- Integral proteins are capable of lateral diffusion in the lipid bilayer. The lipid bilayer has many dynamic motional properties - rapid internal motion involving flexing, lateral diffusion of the lipids transfer of lipid molecules from the one side of the bilayer to the other rotation about their axes.

PAGE No.
DATE / /

(3) Function of ER :-

(1) The endoplasmic reticulum is the site of secretion of Secretory Proteins are synthesized on the ribosome and enter the cisternae through channels in the membrane.

(2) It is also associated with the synthesis and breakdown of fatty acids and glycogen.

(3) ER is the major site of synthesis of cholesterol and steroid hormones.

(4) It provides additional mechanical support to cytoplasm.

(5) It also acts as an intracellular transport system for various substances

(6) Exchange between the nucleus and cytoplasm takes place through nuclear openings which communicate with the endoplasmic reticulum.

(7) The ER also Provides an extensive internal surface for exchange of material between the ~~material between~~ the cytoplasm and the lumen of cisternae.

(4) Function of Plasma membrane

(1) The plasma membrane acts as a barrier which however permits the movements of certain substance in and out of the cell.

(2) cell membrane are selectively permeable neither they Semi permiable

(3) Transport of molecules across the membrane may be active or passive thus the membrane regulates the Passage of certain nutrients, molecules into the cell the normal of waste

Products and the released of secretory product from cell.

④ It also protects various organelles of the cytoplasm and gives origin of certain cell organelles.

⑤ The cell membrane also contains receptors which recognize specific hormones molecules responding to a variety of stimuli and the site for cell recognization.

⑥ The plasma membrane of bacterial the electron transport chain which plays an important role in cell respiration.

⑦ It Provides the shape to the cell in different tissue.

⑧ It is flexible and hence allow cell to expand to a certain extent.

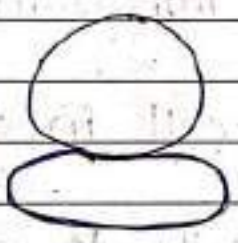
⑤ Ribosomes :-

⇒ Ribosomes are one of the important cell constituents, first observed by Palad (1955) essencially involved in Protein synthesis. They are found both in Prokaryotes and eukaryotes, Ribosomes may be found either in the free state or attached to the outside of cytoplasmic membrane like the endoplasmic reticulum, structure → Ribosomes are cytoplasmic non-membranous ribonucleic Protein granules of 150-200 A° diameter. They have a typical binary and constricted structure with the two units being unequal in size The prokaryotic and eukaryotic ribosome are differentiated on the basis of the sedimentation coeficient.

PAGE No.
DATE / /

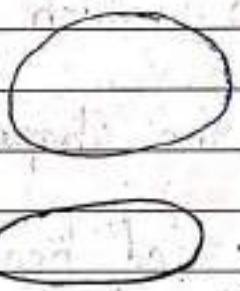
These are of 2 basis types 70 s and 80 s ribosomes found in Prokaryotes and eukaryotes respectively. The 's (svedberg unit) refers to sedimentation coefficient which shows how fast a cell organell sedimentation coefficient. 80s ribosome. of Prokaryotes are relatively smaller and consist of a large 50s subunit and a small 30s subunit

① Prokaryotes



70s ribosome

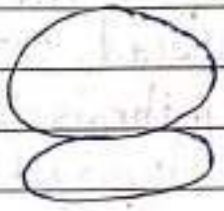
subunit



→ 23 s rRNA
5 s rRNA
+
31 Proteins

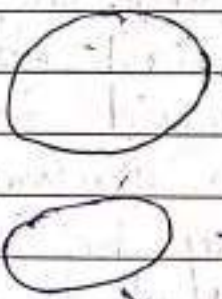
→ 16s rRNA
21 Proteins

② Eukaryotes



80s Ribosome

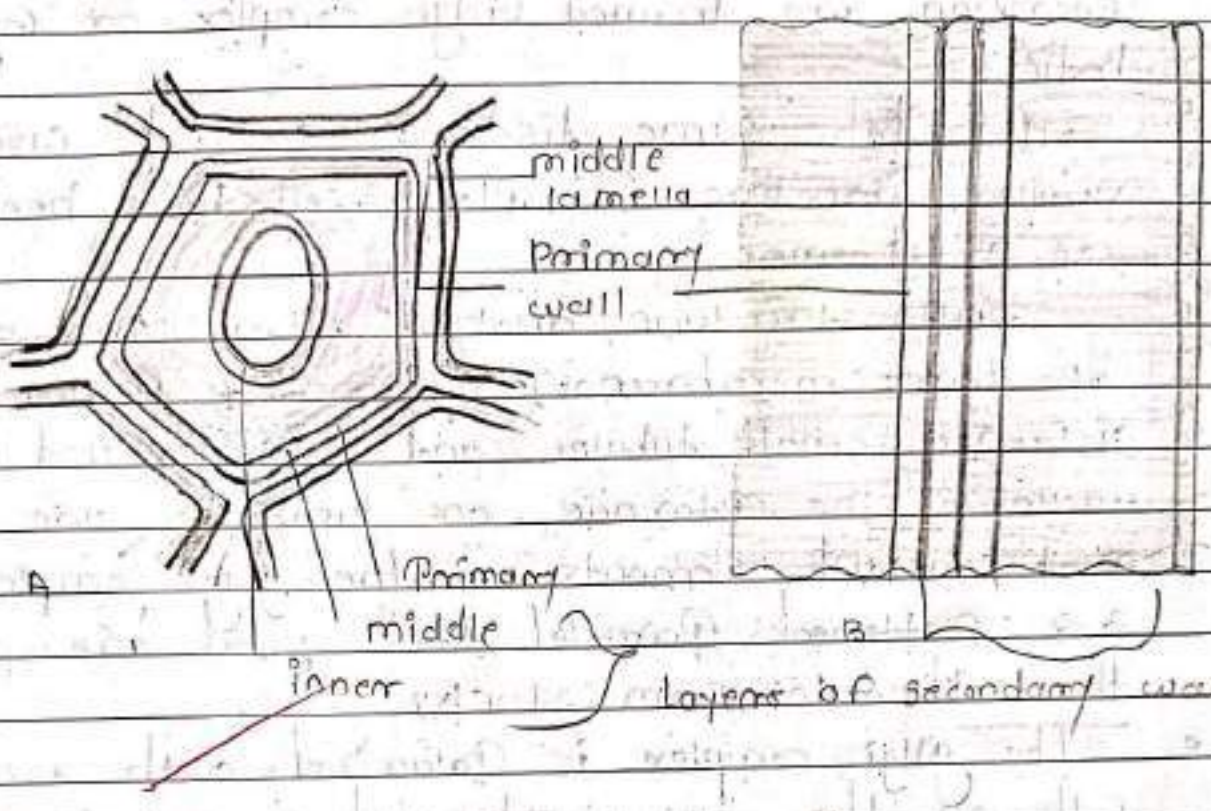
subunit



→ 28 s. rRNA
5.8.s rRNA
5s RNA
49 + proteins.

→ 18s rRNA
- 33 - Proteins

⑥ Draw well labelled diagram of plant cell.



PAGE No.
DATE / /

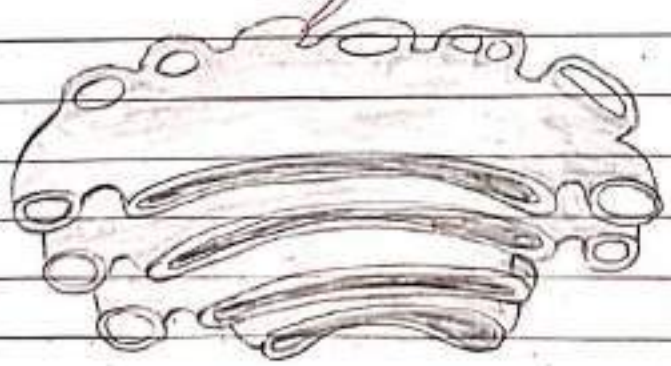
(7) Golgi complex

⇒ A stack of cytoplasmic tubules concerned with secretion are termed Golgi complex or Golgi bodies.

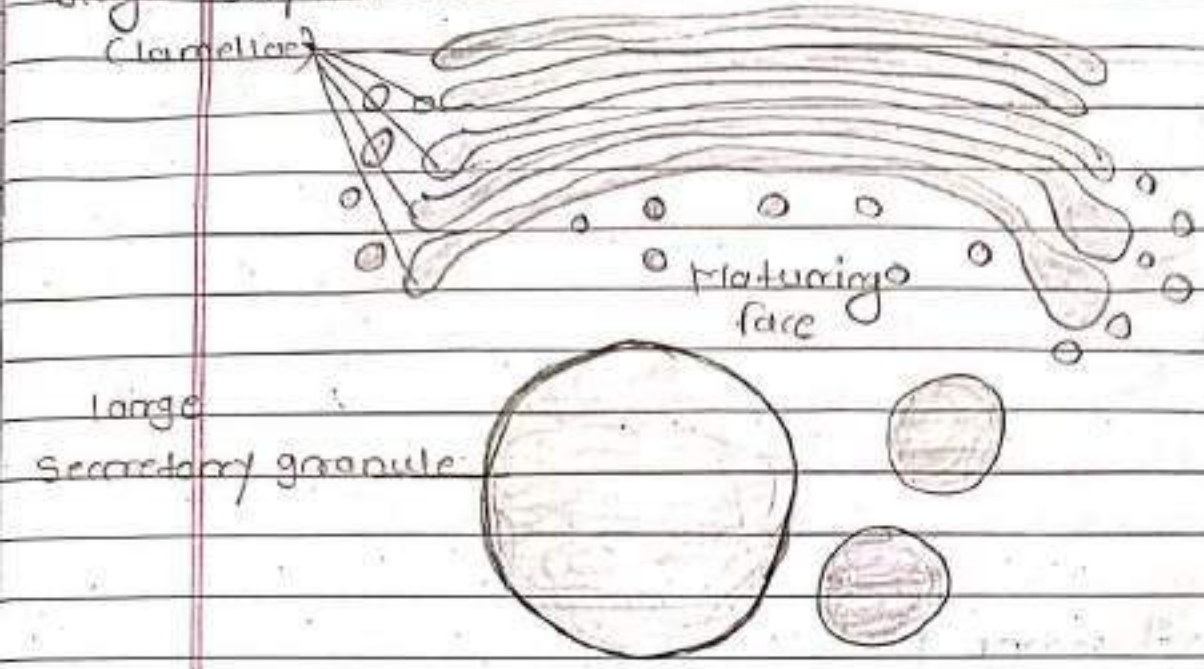
After the name discover C. Golgi (1890) Similar structure in plant cell have been terme as Dictyosome.

Ultrastructure analysis revels the porsence of three membranous components. flattened sacs o cisternae. small tubules and vesicles and large vacuoles The cisternae or lumellae are the most constant elements of the golgi complex. 3-8 flattened Parallel sacs piled one upon the other to form stacks.

- The golgi complex is Polarized with faming fall on the outer side and a maturing face on the opposite side.
- The small vesicles are 400 : 800 A° in diameter and are intimately associated with the cisternae. may show continuity with them.
- The large vacuoles are clear and lie at the edge of the complex.



A. forming face



B

The golgi complex – Stereoscopic view B. section

(8) Vacuoles :-

⇒ As much as 90 Percent of the volume of many plant cells is occupied by a single membrane bound fluid filled central vacuole. These are conspicuous organalles of most plant cell.

- The apical meristem cells typically contain more number of small vacuoles during the maturation of the cell that small vacuoles coals into one or few vacuoles.
- The vacuoles are simple is structure incompassed by a thin membrane called tonoplast. The vacuoles of a mature plant cell is formed from the endangement and fusion of smaller vacuole present in meristematic cells. The vacuole store large variety of molecules including inorganic ions organic acids sugars enzymes storage Proteins and many other types of secondary metabolism.

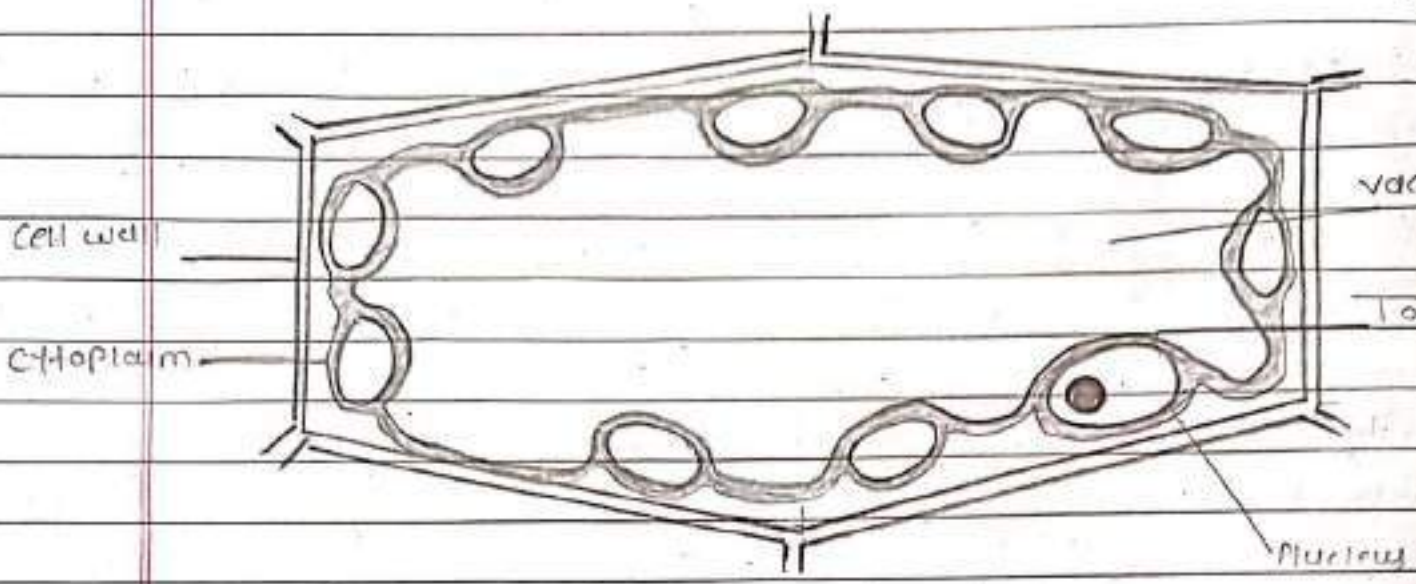


Fig Plant cell vacuoles

- ⑨ **70s Ribosomes :-**

The 70s ribosome of prokaryotes is relatively smaller and consists of a large 50s and small 30s subunit.

- Ribosome may occur in the free form in Prokaryotes and are then called monosomes may be associated with mRNA to form polysomes as in eukaryotes.
- The 30s such unit is oriented transversely to the centered protuberance of 50s subunit.

★ **Short answers :-**

1. **RER**

⇒ The rough structure of endoplasmic reticulum is due to presence of ribosomes on the membrane surface which the smooth ER are not covered with ribosomes.

2. **SER**

The smooth endoplasmic reticulum do not have attached ribosome on the membrane surface.

PAGE No.
DATE / /

3. Carrier Protein :-
Carrier Protein bind specific molecules to be transported on one side of the membrane.
The example of carrier Proteins include sodium potassium pump (Na^+ K^+ pump)

4. Cytology :-
The study of plant and animal cell including their structure function and formation.

5. Cell
The cell is the structural and functional unit of life.
- The plant body consists of a number of small microscopic, box like, compartments called cells
- Cells is also known as universal elementary units of organic structure.

6. Annulus :
Between the inner wall of plasmodesmata and the desmotubule is a cytosolic annulus through which molecules can pass.

7. Extrinsic Protein :-
The extrinsic or Peripheral Proteins are soluble readily dissociated from the plasma membrane and are entirely outside the lipid bilayer.

8. Intrinsic Protein
The intrinsic or integral proteins are

amphipathic with hydrophilic polar heads protrude from the surface of the membrane, while non-Polar regions are embedded in the interior of the membrane. The integral proteins are capable of lateral diffusion in the lipid bilayer.

9. Tonoplast

The vacuole bounded by single semi permeable membrane called tonoplast.

10. Vacuole

As much as 90 percent of the volume of many plant cells is occupied by a single membrane bound fluid filled central vacuole. The vacuole are simple in structure. The vacuole bounded by single membrane called tonoplast.

11. ATP :-

Chemical energy produce by the mitochondria is stored in a small molecule called adenosine triphosphate (ATP).

12. Cisternae

The cisternae are long flattened sac-like unbranched tubule having the diameter of 40 to 60 mu. They remain arranged parallel in bundles or stalkes.

13. Secretory vesicles

The secretory vesicles form trans Golgi complex and they release their contents to the

cell exterior by exocytosis in response to extracellular signals.

14. Functions of golgi complex :-

Golgi bodies are involved in the synthesis packing and secretion of different substence

- secretory products are found in the cisternae of the golgi lamellae while in others the secretory product completely fill the cisternae.

15. Plasmodesmata

The cell wall of some plant cell hull some canal like appertures these canal of cell wall are known as plasmodesmata.

* Very short answer questions :-

1) Scarification

=> The method employed in softhing or weakening the seed coat is called scarification. The seed coat may be punctured or mechanically ruptured at one or more place as sufficient to breeak their dormancy.

2) Dicotyledonous exabhuminous seed.

Each seed is attached to the placental tissue on the fruit suture by a stalk called the funicle The funicle is narrow at the placental end but wideas into a disc where it join the seed.

3) Dicotyledonous albuminous seed.

In this type of seed (ground plant) the food is not store in the two cotyledons of the embryo but in the endosperm external to the embryo.

4) Monocotyledonous exalbuminous seed.

Although all the common monocotyledonous seeds are albuminous there we a few of the exalbuminous type this type of seed is found in the Aroideae (e.g pathos and Amorphophallus campanutus) and also widely is the families Hydrocharitaceae (e.g) vallisneria, Alismaceae (e.g Alisma plantago) Najadaceae etc.

5) Monocotyledonous albuminous seeds :-

The large endosperm of the ereals is the most important source of starch, the principle food of all people. Rice (paddy) wheat and maize

may be taken as the types seed of this class the outermost layer of the endosperm is the aleurone layers which contains mainly Protein

(6) Stratification.

This method is used to break the dormancy of seeds caused due to condition of the embryo In this process the seeds are exposed to well aerated, moist conditions under low temperature (0 to 10°c) for weeks to months this treatment called stratification.

(7) Provenance :- It has already been stated that a number of factors operating before and during harvest can affect seed viability It is surprising then that samples of seed obtained from different sources may show differences in viability behaviour.

(8) Genetic erosion :-

loss of Genetic diversity (Genetic erosion) including the loss of individuals genes or particular combinations of genes and loss of varieties and crops occur rapidly in crops mainly because of traditional landraces by modern high yielding cultivatures, natural catastrophes and large destruction and modification of natural habits.

(9) Irrigations :- Irrigation can be important at planting for seed crops on dry soils to ensure good uniform (germination and adequate crop

stands Excess moisture or prolonged drought adversely affects germination and frequently result in poor crop stands.

(10) Substrate.

The substrate serves as a moisture reservior and acts as a medium for the seeds to germinate and the seedlings to grow. The common used substrate are paper and sand.

(11) farmer seed

The biodiverse agroecological food production systems used by small-scale farmers to provide most of the food require local varieties of seed that are adapted to local growing conditions test and cultured.

(12) Breeder seed :

It is the seed or vegetative propagating material produced by the breeder. who develops or evolves the particular variety. The seed is also produced by other agricultural universities under the direct supervision of the breeder of the concerned crop.

(13) foundation seed

foundation seed including 'Select' in Canada. is seed stock so handled as to most nearly maintain specific genetic identity and purity. and that may designated or distributed by an agricultural experiment station.

(14) Certified Seed

Certified seed is produced from foundation seeds this seeds is certified by the state seed certificatio Agency established under the state governments Certified seed is produced by the national seeds distributed / sold to farmers.

(15) water Impermeability

Hard seed coat prevent the entry of water into the seed, when seed are fully mature & placed in warm moist well aerated soil do not germinate due to the failure of water to penetrate through the hard seed coat.

(16) Gas impermeability : Entry of gases particularly of oxygen is very essential for germination to begin fully mature many cases plant seed posses hard seed coat due to this prevent the exchanges is obstructed.

(17) Mechanical Resistance :- In a number of plants the hardness of the seed coat also offers mechanical resistance for the emergence of the radical.

(18) Relative Humidity

Relative humidity and temperature by far are the most important factors determining the storage life of seeds. seed attain a rather specific and characteristics moisture content when subjected to given levels of atmospheric humidities.

PAGE No.
DATE / /

(19) Seed rate :- lower seed rates than usual for raising commercial crop are desirable because they facilitate rouging operations and inspection of seed crops.

(20) Rouging :- Adequate and timely rouging is extremely important in seed production Rouging in most of the field crops may be done at many of the following stages as per needs of the seed crop.

a. vegetative / preflowering stage.
b. flowering stage
c. Maturity stage.

(21) Normal seedlings :- seedling which shows the capacity for continued development into mature plant when grow under favourable conditions and having well developed root and the shoot system.

(22) Abnormal seedlings :- seedling with any abnormality in their root or shoot system thus which do not have the capacity to develop into a normal plant when grow.

(23) Hard seeds :- Seed which remain hard at the end of the prescribed test period because of the non absorpsaption of moisture due to the present of impermeable seedcoat. Usually hard seeds are in leguminous crops.

(24) Dead seed :-

The dead cells in plants are sclerenchyma cells The mature cells in the sclerenchyma are made of dead cells. The function of sclerenchyma cells is to provide mechanical support.

(25) Bulk isp inspection :- for checking homogeneity of the bulk as compare with the sample inspected.

(26) sample inspection :-

for quality and to maintain genetic purity a lab test of representive samples drawn by the S.C.A. for determing % of germination moisture content. coeed seed content admination admixture and purity.

* Short answers questions :-

(1) Explain structure of seed.

The various part of a seed may be easily studied after it has been soaked in water for a day or so varying according to the nature of the seeds. A mature seed conteins an embryonic plant (with a radicle and plumule) and is provide with reverse food materials and protective seed coats. A mature pod of pea (pisum sativum) has a number of seed arranged in two rows.

The seed are attached to the fruit wall by a small stalk, the funiculus. At maturity on one side of the seed coat a narrow, elongated scar representing the point of attachment of seed to its stalk is distinctly seen. this is the hilum. Close to the hilum situated at one seed end of its there is a minute pore micropyle during seed germination water is absorbed mainly through this pore and the radicles come out through it.

Continuous with the hilum there is sort of ridge in the seed coat the raphe. The seed is covered by two distinct seed coats; the outer within one is the testa, while the other inner thin hyaline and membraneous covering is the tegmen. The seed coats given necessary protein to the embryo which lies within. The whitish fleshy body as seen after removing the seed coats is the embryo. IT consists of two fleshy cotyledons and a axis to which the cotyledons remain attached The position of the axis lying outside the cotyledons bent inward and directed towards the micropyle is the radicle and the other position of the axis lying in between two cotyledons is the plumule.

The plumule is crowned by some minute young leaves. The radicle gives rise to the root the plumule to the shoot and the cotyledons store up food material since the reserve food material is stored in the massive cotyledons and the seed lacks a special nutritive tissue, the endosperm.

The seeds which lack endospermal maturity are called non-endospermous or exalbuminous

on the other hand is several other plants such as castor bean (Ricinus communis) coconut (cocos nucifera) and cereals food is stored in the endosperm.

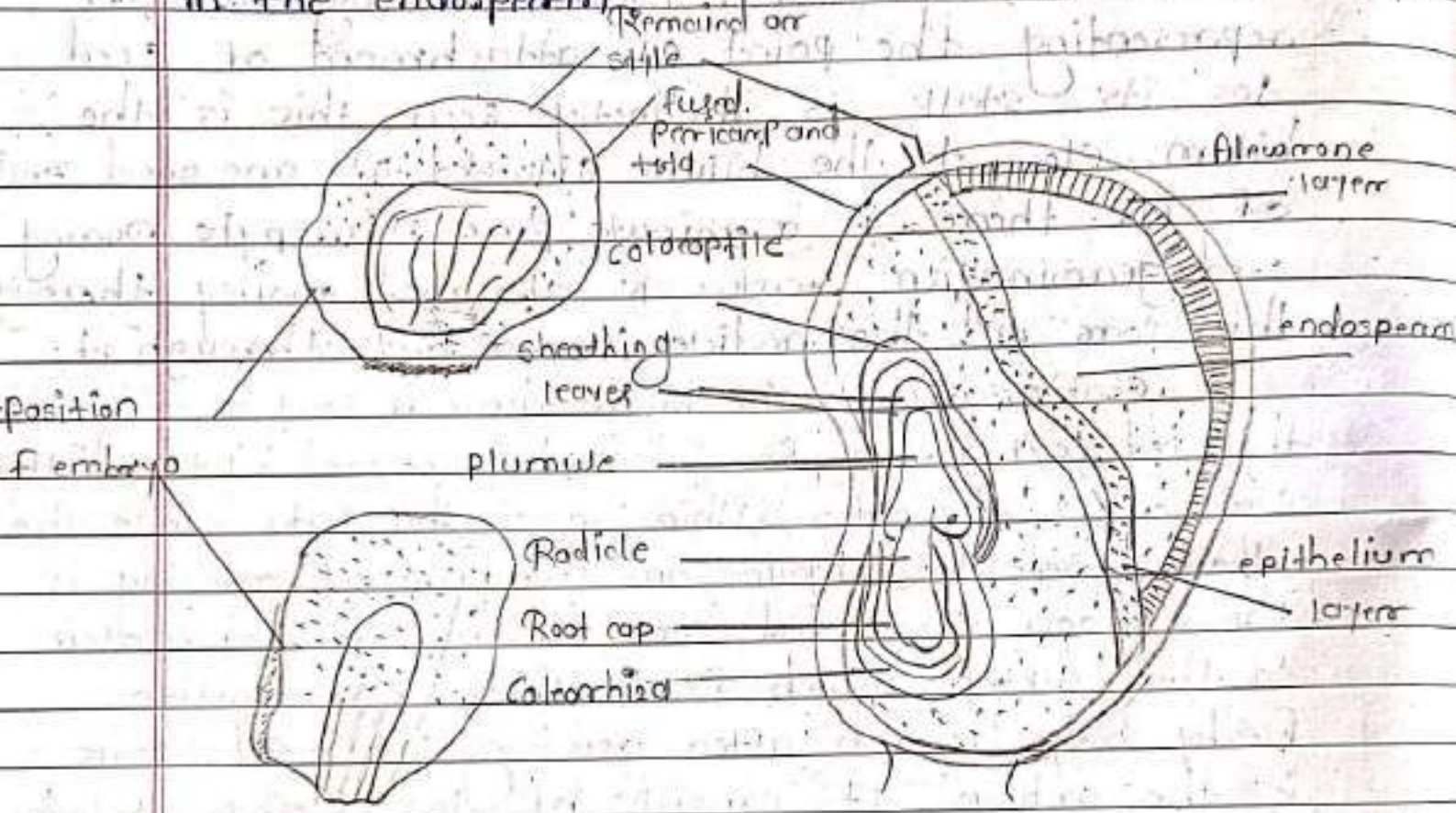


fig :- Structure of maize grain A grain illustrating of external characters B. grain as seen from lateral side. C section of the grain showing its internal characters.

(2) Types of food

A seed is an embryonic plant enclosed in a protective outer covering. The formation of the is part of the process of reproduction in seed plants. the spermatophytes including the gymnosperm and angiosperm plants. They are as follows.

(1) Dicotyledonous seeds :- Two embryonic leaves or cotyledons.

Monocotyledonous seed :- one embryonic leaves or cotyledons.

PAGE No.
DATE / /

* Dicotyledonous Exalbuminous seeds. Each seed is attached to the placental tissue on the fruit suture by a stalk called the funicle is narrow at the placental end but widens into a disc where it joins the seed. when the mature seed is detached the broad end of the funicle leaves a scar on the seed called the hilum next to the hilum is a pinhole opening on the seed coat which is the micropyle.

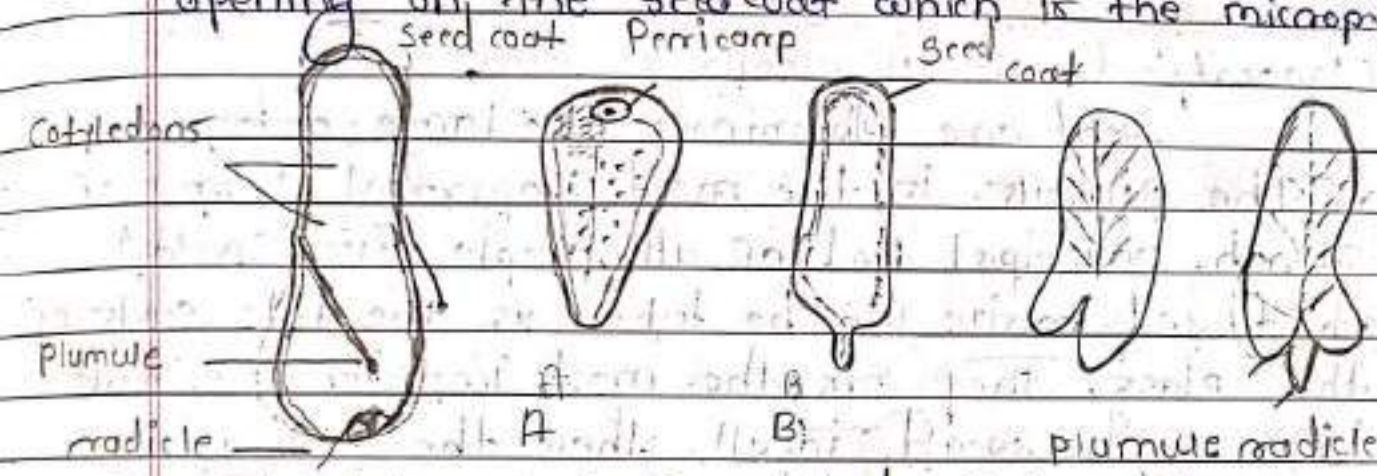


fig:- Dicotyledous exalbuminous seed. fig 33 l.so of Tack-fruit seed Note unequal cotyledons fig 34. sunflower seed A. fruit B. enclosing single seed. B. kernel on breaking open the pericarp C. dissected embryo

* Dicotyledonous Albuminous seeds :- In this type of seeds (ground plan) the food is not stored in the two cotyledons of the embryo but in the endosperm external to the embryo. It will be seen later that all embryoes yet their food them endosperm which is its food from the nucellus of the ovule.

In the exalbuminous types of seed the embryo completely consumes the endosperm and nucellus that they are the no longer seen while the food is kept stored in the cotyledons which become swollen. In the albuminous type of endosperm is still present and the cotyledons they are thin acting only as food sucking organs.

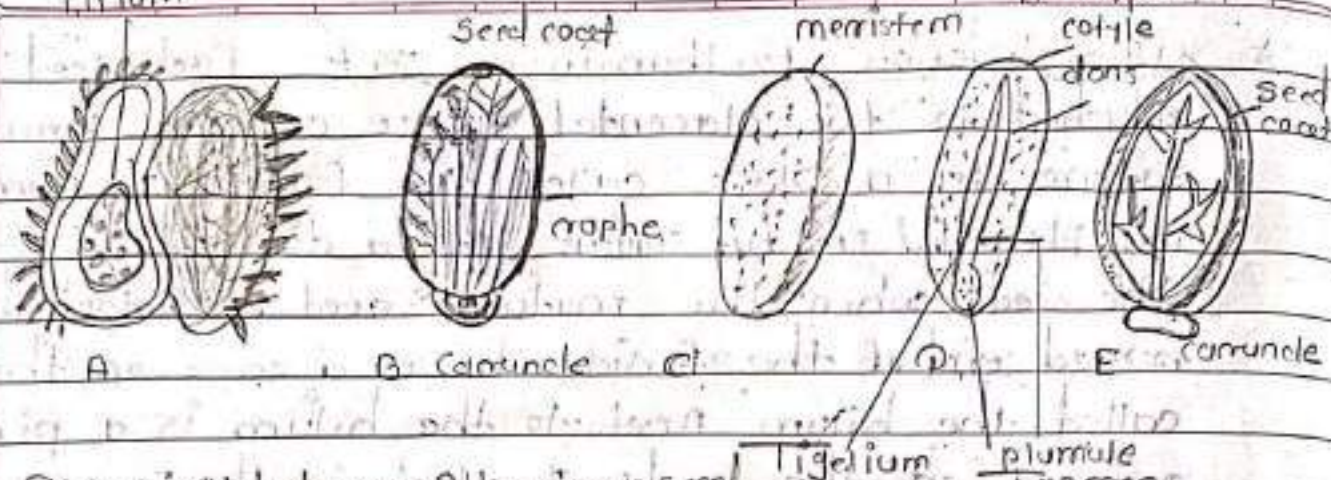


Fig:- Dicotyledonous Albuminous seed

* Monocotyledonous Albuminous seeds.

Seed are albuminous the large endosperm of the cereals is the most important source of starch. principal food of all People Rice (paddy) wheat and maize may be taken as the type seeds of this class. They are the most important cereals crops of the coorld. In all these the ~~caryo~~ grain are actually fruit of the caryopsis type. The rice grain is tightly covered by the husks. in wheat the husks are loose while in maize the husks are loose. while in maize husks are short and loose so that the grains are exposed In all the three outer coating of the grain is formed by the fusion of the Pericarp and the seed coat

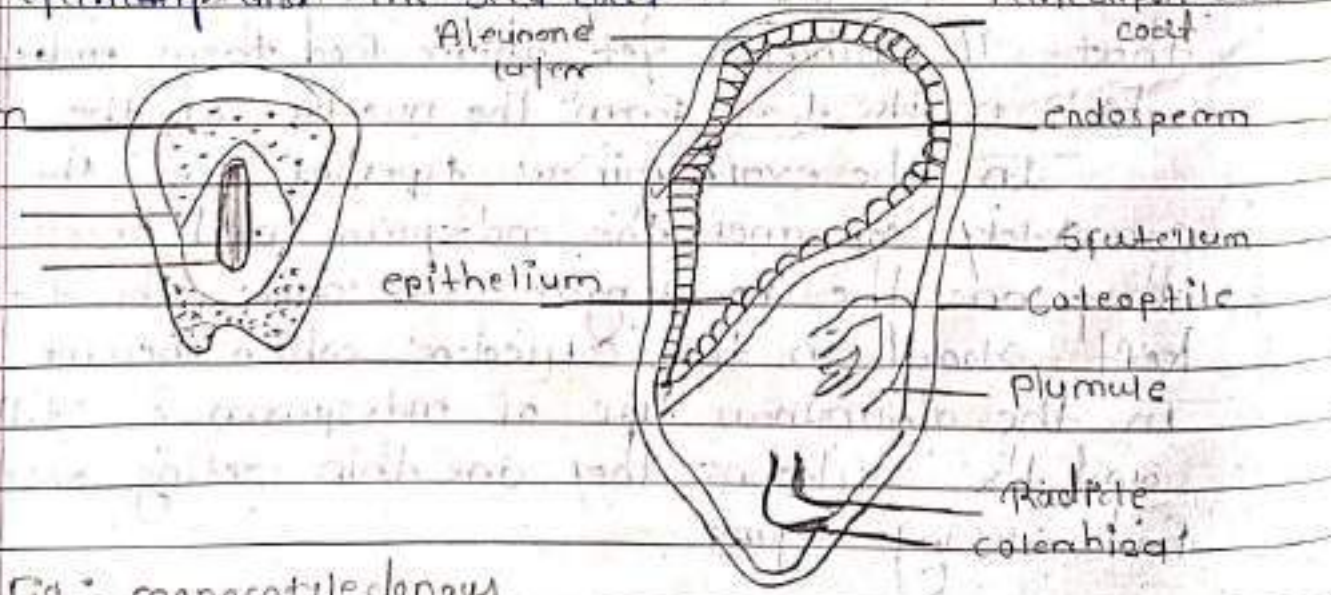


Fig: monocotyledonous albuminous seed

PAGE NO.
DATE / /

★ Monocotyledous Exalbuminous seeds :-

Although all the common monocotyledonous seeds are albuminous there are a few of the exalbuminous type. This type of seed is found in the Aroideae (e.g pathos and Amorphophallus campanulatus) and also widely in the families Hydrocharitaceae e.g vallisneriod Alismaceae (e.g Alisma plantago). Najadaceae etc.

The seed of Alisma shows a curved embryo with a radicle and a cotyledon as shown in the figure.

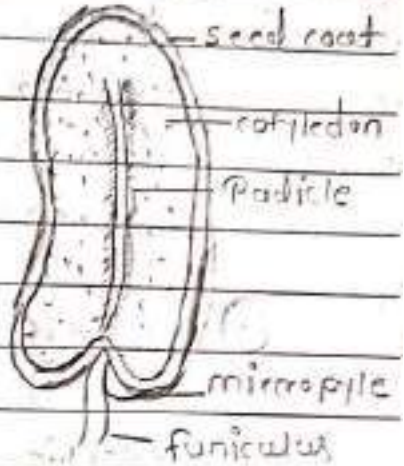


fig :- Monocotyledonous Exalbuminous seed

② Causes of seed Dormancy

a) Dormancy due to hard seed coat :- seeds of many species such as these belonging to the family leguminosae & malvaceae posses hard seed coat such seed remain dormant. The presence of hard seed coat prevent the germination because of three reason.

a] Water impermeability :- Hard seed coat prevent the entry of water into the seed when seed are fully mature & placed in warm moist venerated soil. Seed do not germinate due to the failure of water to penetrate through hard seed coat.

b] Gas impermeability :- Entry of gases particularly of oxygen is very essential for germination, to begin many cases plant seed possess hard seed coat due to this prevent the exchange of gases - particularly the uptake of oxygen is obstructed.

c] Mechanical resistance :- In a number of plant

PAGE No.
DATE / /

the hardness of the seed coat also effects also mechanical resistance for the emergence of the radical.

(2) Dormancy due to immature embryo :- The most of the plant when the seeds are shed from the Parents plant. The embryo inside the seed is fully developed In a few cases the development of embryo is incomplete when the seeds are dispersed As a result such seeds remain dormant & fail to germinate.

(3) Dormancy due to specific light condition :- The seed of some speciel like lettuce, tobacco etc. have a specific light requirement for germination It has been observed that the seed of lectuce may be simulated to germination by subjecting it to red light of wave length of 660nm. This a clear indication of the involvement of phytochrome Pigment germination Intensity of light is known to increase the rate of germination in Rumex

(4) Dormancy due to specific chilling :- It has already been mentioned that many temperature plant such as Peach, plumb etc require a specific chiling of their seed before they can germinate. To their plants. neither provides the chilling requirement during winter and the seed germinate subsequently most suitable chilling temperature range is between 0 to 5°C

PAGE No.
DATE / /

(4) Method to break and the seed dormancy :-

The duration of period of dormancy varies from species to species there are various method of used for breaking the dormancy of seeds so that they may be germinate promptly method empl oyed depends upon the cause of dormancy some common method employed are describe below.

1) Scarification :- The method employed in softening or weelsening the seed coat is called scarification. The coat may be punctured or mechanically ceptured at one or more place as sufficient to break dormancy mechanical scarification is done by shaking the seeds with sand or by scraching or nicking the seed coat with knife.

2) Stratification :- This method caused due to condition of embryo. In this process the seeds are exposed to well aerated. moist conditions under low temperature (0 to 10°c) for weeks to months. This treatment is called stratification.

(3) low temperature treatment :- In case where seed dormancy is result of physiological cause problems is overcome by the seed exposure to low temperature at 0 to 6°c for two or three months. Difference beth the low and high temperature should be about 10°c more favourable result are obtained in the low temperature than the high temperature.

(4) Alternating temperature :- In some cases subjecting the seed to alternating low and high temp also breaks the dormancy of embryo difference between the low and high temperature should be about 10°c more favourable results are obtained in the low temperature than the high temperature.

(5) Exposure to light :- Seed of the most species germinate if it is exposure to the light. In day condition seed exposure to light is inffective.

(6) Pressure :- Subjecting the seed of some plant to high hydraulic pressure at medium temperature increase the permeability of seed of coat to water and thereby greatly improved the gramination of seeds Seed exposure to high H_2O pressure improve the percent of germination of seed.

(5) Write a note on seed storage :-

Purpose of seed storage :- The purpose of seed storage is to maintain the seed is good physical and physiological condition from the time they are harvested until the time they are planted. Stages of seed storage The seed are considered to be in storage from the moment they reach physiological maturity until they germinate or until they are known dead because they are dead or otherwise worthless. The entire storage period can be conveniently divided into following stages.

(1) storage on plants (physiologically maturity until harvest
(2) Harvest until processed and store in a warehouse.
(3) In storages (warehouses)
(4) In transit (rail wagons, truck carts, railway shed
(5) In retail store
(6) On the use's farm.

The seed quality. i.e germination and vigours can be considerably affected at any of the stages mentioned above, unless sound principle involves in seed storage are practiced the seeds properly handled.

PAGE No.
DATE / /

- General Principles of the seed storage :-

In view of the various factors affecting seed viability in storage, the following Principle emerge as necessary for good storage.

(a) Seed storage condition should be dry and cool.
(b) Effective storage pest control.
(c) Proper sanitation in seed stores.
(d) Before placing seed into storage they should be dried to safe moisture limits appropriate for the storage system.
(e) storing of high quality seed only i.e well cleaned treated as well as of high temperature germination with vigour and pre-storage history
(f) Determine seed storage needs in view of period or length of storage time and prevailing climate of the during storage period.



BK

Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 3rd Year

Sem - V

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Aadesh Dhanraj Dhengre	Aadesh	Aadesh
2	Achal Sanjayrao Watane	watane	watane
3	Akshay Suresh Mahant	A. mahant	A. mahant
4	Amisha Amrut Dambhare	A.A. Dambhare	A.A. Dambhare
5	Ashwini Shudhodhan Rakshit	A. rakshit	A. rakshit
6	Bhagyashri Sanjay Choudhari	B. chaudhari	B. chaudhari
7	Bhagyshri Anil Wangal	B.A. wangal	B.A. wangal
8	Deepali Harichandra Thombre	DHT	DHT
9	Durga Guruchandra Wankhede	durga..	durga..
10	Himanshu Harichandra Naik	h. naik	h. naik
11	Hina Udebhan Nisave	hina	hina
12	Isha Liladharrao Gharad	I. L. Gharad	I. L. Gharad
13	Janhvi Rajesh Tatte	J. Tatte	J. Tatte
15	Janvi Sudhakar Kakde	Janhvi. K	Janvi. K
16	Jay Sanjay Potpite	Jay	Jay
17	Jayashri Naresh Barai	Jayashri. Barai	Jayashri Barai
18	Khushi Bhupendragiri Goswami	Khushi. G	Khushi. G

19	Mahima Gunvanta Choudhari	Mahima	Mahima
20	Mona Damodhar Parkhi	MParkhi	MParkhi
21	Priyanka Mahesh Bondre	P.M. Bondre	P.M. Bondre
22	Rahul Sahebrao Balpande	RSBalpande	RSBalpande
23	Raksha Shriram Kothe	Raksha	Raksha
24	Riya Diliprao Bangare	RBangare	RBangare
25	Ruchika Sunil Dhawale	RBangare	RBandare
26	Sahili Anandrao Gajbhiye	Sahili.	Sahili.
27	Sakshi Prabhakar Dhote	Sakshi	Sakshi
28	Sakshi Shriram Kale	SKale	SKale
29	Sejal Kailas Wahane	SKW	SKW
30	Shital Vijay Rewatkar	SRewatkar	SRewatkar
31	Shraddha Gopal Gore	Shrgore	Shrgore
32	Swati Maroti Wankhede	S.M.Wankhede	S.M wankhede
33	Toshal Dhanraj Fule	ToshuFule	ToshuFule.
34	Vaishanavi Kisanaji Choudhari	Choudhari	Choudhari
35	Vaishanavi Sudhakr Walke	VSwalke	VSwalke
36	Vedinee Sanjay Tathode	Vedisrathode	Vedisrathode

Page No.

Date 30/10/2023

Name - JAY POTPITE

class - B.Sc (III rd year V-sem)

Sub - Botany

School - Nabira Mahavidyalaya
Kadol.

Session - 2023-24

Unit - I

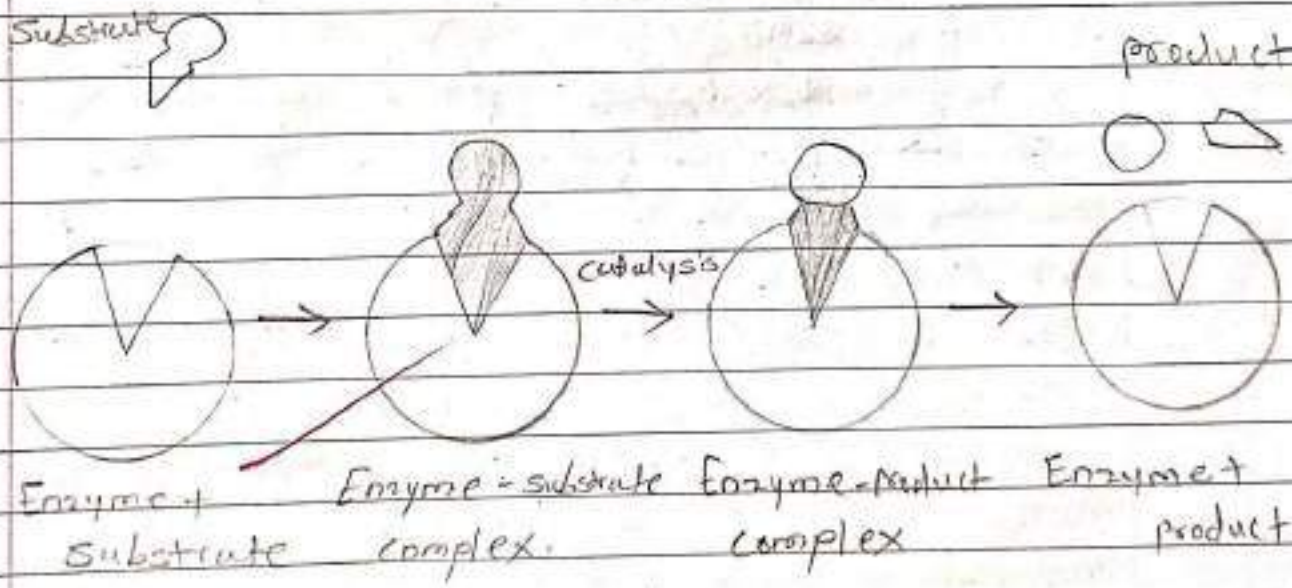
1. Write on :-

a) Lock and key and induced fit model of enzyme-action.

Ans :-

The lock and key model

According to the lock and key model, the enzyme's active site complements the substrate precisely. The substrate fits a particular active site like a key fits into a particular lock. This theory of enzyme - substrate interaction explains how enzymes exhibit specificity for a particular substrate.

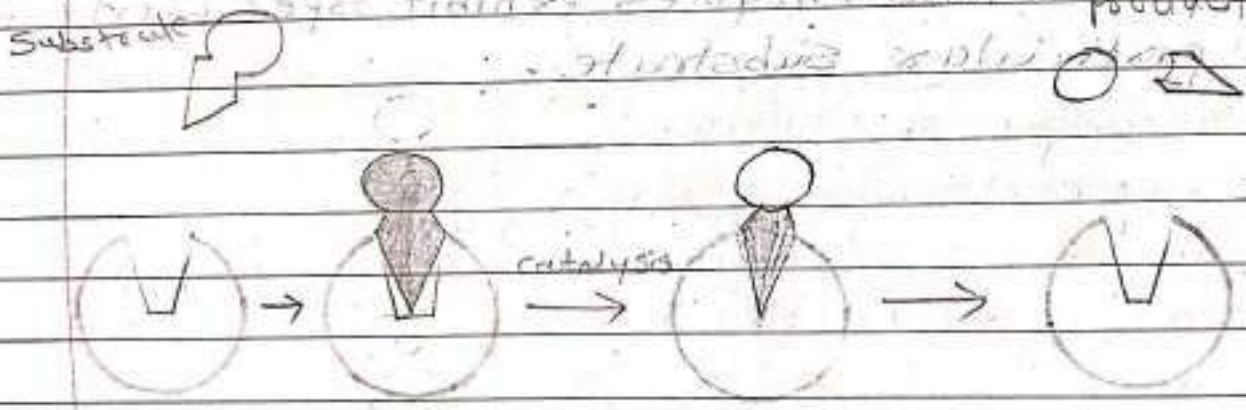


The induced fit Model

According to the induced fit model, the enzyme's active site is not a completely rigid fit for the substrate. Instead, the active site

will undergo a conformational change when exposed to a substrate to improve binding. This theory of enzyme-substrate interactions has two advantages compared to the lock and key model:

- It explains how enzymes may exhibit broad specificity (e.g. lipase can bind to a variety of lipids).
- It explains how catalysis may occur (the conformational change stresses bonds in the substrate, increasing reactivity).



b) Nomenclature of enzymes.

Ans:) An enzyme will interact with only one type of substance or group of substances, called the substrate, to catalyze a certain kind of reaction. Because of this specificity, enzymes often have been named by adding the suffix "-ase" to the substrate's name (as in urease, which catalyzes the breakdown of urea). Not all enzymes have been named in this manner, however, and to ease the confusion surrounding enzyme nomenclature, a classification system has been developed based on the type of reaction the enzyme catalyzes. There are six ~~principle~~ principal categories and their reactions.

1) Oxidoreductases, which are involved in ~~electron~~ electron transfer;

2) Transferases, which tranfer a chemical group from one substance to another.

3) hydrolases, which cleave the substrate by uptake of a water molecule (hydrolysis);

4) lyases, which form double bonds by adding or removing a chemical group.

5) Isomarases, which transfer a group within a molecule to form an isomer;

6) ligases or synthetases, which couple the formation of various chemical bonds to the breakdown of a pyrophosphate bond in adenosine triphosphate or a similar nucleotide.

c) Factors affecting enzyme activity.

Ans) Enzymes are biological catalysts that are proteinaceous in nature.

The factors affecting the enzyme active activity are listed below:

1) Substrate concentration:

The activity of an enzyme also increases with the increase in substrate concentration. If the the substrate concentration increases, then the availability of the active site would decrease. This will affect the activity of an enzyme and limit the reaction rate.

2) pH

Each enzyme has its optimal pH in which they work. For example pepsin and trypsin work on acidic pH. The enzymes are globular. proteinaceous structure, form by the interaction of the hydrogen bond between the side chains of the protein. Any change in the cause deionization of side chain which results in the denaturation of the enzyme.

3) Temperature :
Each enzyme works on its optimal temperature. Any alteration in temperature affects the activity of an enzyme, and it also leads to denaturation of an enzyme.

4) Enzyme cofactor and coenzyme :
Each enzyme requires cofactors (inorganic ion or protein organic molecules) for their work. The non-availability of these cofactors decreases the activity of an enzyme.

5) Enzyme inhibitors :
The inhibitors of an enzyme bind to the active site which affects the activity of an enzyme.

(d) Properties and role of fatty acids.
Properties of fatty acids :

- Fatty acids undergo the same reactions as other carboxylic acids, such as esterification and acid-base reactions.
- The acidities of fatty acids do not vary greatly, as indicated by their pKa values.
- The solubility of fatty acids in water decreases as chain length increases so that longer-chain fatty acids have little effect on the pH of an aqueous solution.
- Fatty acids exist at their conjugated bases

such as oleate, near neutral pH.

- Auto-oxidation occurs when unsaturated fatty acids undergo a chemical change. The presence of ~~heat~~ trace metals speeds up the process, which requires oxygen (air).

- Ozonolysis - ozone is capable of degrading unsaturated fatty acids. This reaction is used in the synthesis of azelaic acid from oleic acid.

~~Roles of~~ Fatty acids have important roles in:

1) Signal-transduction pathways;
2) Cellular fuel sources;
3) the composition of hormones and lipids
4) the modification of proteins;
5) energy storage within adipose tissue (specialized fat cells) in the form of triacylglycerols.

(F) Properties and role of carbohydrates

Ans:) There are Two type of properties

1) Physical
2) Chemical

1) Physical properties of carbohydrates.

- Stereoisomerism - Compounds having the same structural formula but they differ in spatial configuration. Example: Glucose.

has two isomers with respect to the penultimate carbon atom. They are D-glucose and L-glucose.

- Optical Activity - It is the rotational of plane-polarized light forming (+) glucose and (-) glucose
- Diastereo isomers — If the configurational changes with regard to C2, C3 or C4 in glucose. Example: mannose, galactose.
- Annomerism — It is the spatial configuration with respect to the first carbon atom in aldoses and the second carbon atom in ketoses.

2) Chemical Properties of carbohydrates

- Osazone formation : Osazone are carbohydrate derivatives when sugars are reacted with an excess of phenylhydrazine. eg. Glucosazone
- Benedict's test : Reducing sugars when heated in the presence of an alkali gets converted to powerful reducing species known as enediols. When Benedict's reagent solution and reducing sugars are heated together, the solution changes its colour to orange-red / brick red.
- Oxidation : Monosaccharides are reducing sugars if their carbonyl groups oxidize to give carboxylic acids. In Benedict's test, D-glucose is oxidized to D-gluconic acid thus, glucose is considered a reducing sugar.
- Reduction to alcohols : The C=O groups in open-chain forms of carbohydrates can be reduced to alcoholic alcohols by Sodium borohydride,

$NaBH_4$, or catalytic hydrogenation (H_2, Ni, EtOH/H_2O). The products are known as "alditols".

role of carbohydrates

Carbohydrates, also known as carbs, are vital at every stage of life - They're the body's primary source of energy and the brain's preferred energy source. Carbs are broken down by the body into glucose — a type of sugar. Glucose is used as fuel by your body's cells, tissues, and organs. When your body doesn't get adequate carbohydrates, it looks for another energy source, breaking down the protein in your muscles and body fat to use as energy. Glucose is significant for the brain, which can't easily use other fuel sources like fat or protein for energy.

While carbohydrates are most known for providing energy, some carbs can also help promote digestive health. The microbiome is an enormous collection of microbial organisms that live on and in your body, most of them within the gastrointestinal tract or the gut. Many of the microbes within the gut are healthy bacteria that help support immune and digestive health. Certain carbohydrates — like fiber —

act as food for the good bacterice in the gut and promote their growth. Eating foods high in fiber, like fruits, vegetables and whole grains, can also help with regular bowel movements, minimize constipation-related issues and may help lower ~~chto~~ cholesterol and blood sugar.

Write short notes on :-

a) Structure of glucose molecule.

Ans) Glucose is a salt of carbon, hydrogen, and oxygen with the formula $C_6H_{12}O_6$. It is a six-carbon sugar molecule. Glucose occurs naturally in the human body.

Structure of Glucose

- Open-chain form: Glucose has a backbone that is not open or branched, and it is made of six carbon atoms in its open chain form.
- Molecular formula :- The molecular formula of glucose is $C_6H_{12}O_6$ based on the analysis of elements in glucose and the molecular weight of glucose.
- Presence of a 6-carbon unbranched chain: Glucose has an unbranched six-carbon chain

proven by the fact that it totally reduces when combined with concentrated hydrogen iodide and red phosphorus to produce n-hexane.

- Presence of 5 OH groups : Pentadactyl derivatives are formed when glucose reacts with acetic anhydride, indicating five hydroxyl groups. As glucose is a stable molecule, it is impossible for any two OH groups to bind to the same carbon. Thus five OH groups are present on various carbons. An oxime is formed when glucose interacts with hydroxylamine, proving the presence of carbonyl group.

- Presence of terminal CHO function : Upon being mildly oxidised with bromine water, the glucose molecule transforms to glucose acid, which is then reduced with a large amount of HI to produce hexanoic acid.

- Because glucose contains a straight 6-carbon chain with a terminal CHO, the five OH grops can be placed on each of the remaining five carbons to form an open-chain glucose structure. This meets the four valencies of the carbon atom by delivering hydrogen atoms to these carbon atoms.

b) Enzyme - substrate complex theory.

Ans=) The enzyme substrate complex is a ~~tempe~~ ~~tempe~~ temporary molecule formed when an enzyme comes into perfect contact with its substrate. Without its substrate an ~~e~~ enzyme is a slightly different shape. The substrate causes a conformational change, or shape change, when the substrate enters the active site. The active site is the area of the enzyme capable of forming weak bonds with the substrate. This shape change can force two or more substrate molecules together, or split individual molecules into smaller parts. Most reactions that cells use to stay alive require the actions of enzymes to happen fast enough to be useful. These enzymes are ~~the~~ directly coded for in the DNA of the organism.

The enzyme substrate complex is extremely important for a number of reasons. ~~e~~ First, the enzyme substrate complex is only temporary. This means that once the substrate has changed, it can no longer bind to the enzyme The products are released and the enzyme is ready for another substrate molecule. A single enzyme can operate repeatedly millions of times, meaning only a small amount of enzyme is needed in each cell.

c) Properties and role of lipids.

Ans ⇒ Properties of lipids

* Lipids may may be either liquids or non-crystalline solids at room temperature.

* Pure fats and oils are colourless, odorless, and tasteless.

* They are energy-rich organic molecules

* Insoluble in water

* Soluble in organic solvents like alcohol, chloroform, acetone, benzene, etc.

* No ionic charges

* Solid triglycerols (fats) have high proportions of saturated fatty acids.

* Liquid triglycerols (oils) have high proportions of unsaturated fatty acids.

Role of lipids

It is established that lipids play extremely important roles in the normal functions of a cell. Not only do lipids serve as highly reduced storage forms of energy, but they also play an intimate role in the structure

of cell membrane and organellar membranes. Lipids perform many functions, such as:

1) Energy storage
2) making Biological membranes
3) Insulation
4) Protection - e.g. Protecting plant leaves from drying up.
5) Buoyancy
6) Acting as hormones
7) Act as the structural component of the body and provide the hydrophobic barrier that permits partitioning of the aqueous contents of the cell and subcellular structures.
8) Lipids are major sources of energy in animals and high lipid-containing seeds.
9) Activators of enzymes, eg. glucose-6-phosphatase Stearyl CoA desaturase and ω-monooxygenase and β-hydroxybutyric dehydrogenase (a mitochondrial enzyme) require phosphatidylcholine micelles for activation.

d) Monosaccharides ✓

Ans => They are ~~generally~~ usually colourless, water-soluble and crystalline solids. Contrary to their name (sugars), only some monosaccharides have a sweet taste. Most monosaccharides have the formula $C_nH_{2n}O_n$ (though not all molecules with this formula are monosaccharides).

Examples of monosaccharides include glucose (dextrose), fructose (levulose) & galactose. Monosaccharides are the building blocks of disaccharides (such as sucrose and lactose) & polysaccharides (such as cellulose and starch). The table sugar used in everyday vernacular is itself a disaccharide sucrose comprising one molecule of each of the two monosaccharide D-glucose & D-fructose.

Each carbon atom that supports a hydroxyl group is chiral, except those at the end of the chain. This gives rise to a number of isomeric forms, all with the same chemical formula. For instance, galactose and glucose are both aldohexoses, but have different physical structures and chemical properties.

The monosaccharide glucose plays a pivotal role in metabolism, where the chemical energy is extracted through glycolysis and the citric acid cycle to provide energy to living organisms.

e) Role of lipids

Ans:) It is established that lipids play extremely important roles in the normal functions of a cell. Not only do lipids serve as highly reduced storage forms of energy, but they also play an

intimate role in the structure of cell membrane and organellar membranes. Lipids perform many functions, such as:

1) Energy Storage
2) Making Biological Membranes
3) Insulation
4) Protection = e.g. protecting plant leaves from drying up
5) Buoyancy
6) Acting as hormones
7) Act as the structural component of the body and provide the hydrophobic barrier that permits pextitioning of the aqueous contents of the cell and subcellular structures.
8) Lipids are major sources of energy in animals and high lipid-containing seeds.

F) Peptide bond

Ans ⇒ A peptide bond also sometimes called eupepthde bond is a chemical bond that is formed by joining the carboxyl group of one amino acid to the amino group of another. A peptide bond is basically an amide-type of covalent chemical bond. This bond links two consecutive alpha-amino acids from C1 (carbon number one) of one alpha-amino acid and N2 (Nitrogen number two) of another. This linkage is found along a peptide or protein chain.

During the formation of this bond, there

is a release of water (H_2O) molecules. A peptide bond is usually a covalent bond (CO-NH bond) and since the water molecule is eliminated it is considered as a dehydration process. Generally, this process occurs mostly between amino groups.

Meanwhile a peptide is a Greek word that means "digested". A peptide is a short polymer of amino acid monomers linked by an amide bond.

g) Induced fit model.

Ans⇒ The induced-fit model is a model for enzyme-substrate interaction to described that the substrate is capable of inducing the proper alignment of the active site of the enzyme causing the latter to subsequently perform its catalytic function.

It is opposite to the lock-and-key model that is also used to described the enzyme-substrate interaction. In the induced fit model, both the substrate and the active site of the enzyme change in conformation until the substrate is completely bound to the enzyme at which point the final shape and charge is determined. This activitie activates the enzyme into performing its catalytic function.

The induced-fit-model was suggested by Daniel Koshland in 1958. It is the more

accepted model for enzyme-substrate complex than the lock-and-key model. In the lock-and-key model, the interaction of the substrate and the enzyme is ~~linked~~ likened to a key (the substrate) ~~that~~ is highly specific to the lock (the active site of the enzyme). It depicts a rather static and rigid form of interaction unlike the lock-and-key model, the induced fit model shows that enzymes are rather flixible structures in which the active site ~~continuously~~ continually reshapes by its interactions with the substrate until the time the substrate is completely bound to it.

b) Lock and key model.

Ans:- Lock and key model is a theory of enzyme action hypothesized by Emil fischer in ~~1894~~ 1899. ~~Acc~~ According to fischer, enzymes exhibit a high degree of specificity ~~that~~ to the substances they react with. He proposed that this is dye to the shape of the enzyme fitting the shape of the substrate, similar to how a lock only fits a specific key. Using this analogy, the enzyme represents the lock and the substrate represents the key. The order in which the lock and ~~key~~ key model works is as follows:-

1) The substrate (s) bind to the enzyme at the active site, forming an enzyme-substrate complex.

2) The enzyme facilitates the chemical reaction. This reaction can be a synthesis reaction (building by forming bonds) or digestion (breaking bonds to form new substances).

3) The enzyme releases the product (s) of the reaction. Once an enzyme completes a reaction, it can be reused.

i) Disaccharides.

Ans ⇒ Disaccharide, also called double sugar, any substance that is composed of two molecules of simple sugars (monosaccharides) linked to each other. Dir Disaccharides are crystalline water-soluble compounds. The monosaccharides ~~with~~ within them are linked by a ~~gr~~ glycosidic bond (or glycosidic linkage), the position of which may be disignated α- or β- or a combination of the two (α-β-). Glycosidic bonds are cleaved by enzymes known as glycosidases. The three major disaccharides are sucrose, lactose, and maltose.

Sucrose, which is formed following photosynthesis in green plants, consists of one molecule of glucose and one of fructose bonded via an α-β-linkage. Lactose (milk sugar), found in the milk of all mammals, consists of glucose and galactose connected

by a β-linkage. Maltose, a product of the break down of starches during digestion, consists of two molecules of glucose connected via an α-linkage. Another important disaccharide trehalose, which is found in single-celled organisms and in many insects, also consists of two molecules of glucose and an α-linkage, but the linkage is distinct from the one found in maltose.

j) Role of carbohydrate

Ans ⇒ Functions of carbohydrates.

Carbohydrates are widely distributed molecules in plant and animal tissues. In plants and arthropods, carbohydrates from the skeletal structures, they also serve as food reserves in plants and animals. They are important energy sources required for various metabolic activities, the energy is derived by oxidation.

Some of their major functions include

* Living organisms use carbohydrates as accessible energy to fuel cellular reactions. They are the most abundent dietary source of energy (4 kcal/gram) for all living beings.

* Carbohydrates along with being the cheif energy sources of energy. Glucose is broken down by glycolysis / Kreb's cycle to yield ATP.

K) Properties of enzymes.

Ans:) Properties of Enzyme can be classified into;

1) Physical properties
2) chemical properties
3) General properties

Physical properties of Enzymes

* Physically enzymes act as colloids or as high-molecular-weight compounds.

* At a ~~tempert~~ temperature below the boiling point of the water, enzymes are killed or inactivated.

* Most enzymes in the liquid medium are inactive at 60°C.

* Extracting dried enzymes can withstand temperatures of 100 degrees Celsius to 120 °C or even higher. Enzyme are, therefore, thermos-labile.

* The optimum activity of each enzyme is always at a particular temperature, which typically varies from 25°C to 45°C. At 37°C, enzyme action is strongest and as temperature rise above 60°C enzyme become inactive.

Chemical properties of enzymes

* catalytic properties :- Biological catalysts are enzymes. The greater amounts of compound are catalyzed by a small number of enzymes. This means that enzymes are highly capable of turning giant ~~arm~~ amounts of the substrate into a substance. Enzymes improve the ~~action~~ reaction rate and remain unaffected by the reaction they catalyze.

* Enzyme specificity : Enzymes are extremely variable in nature, which means that a specific enzyme can catalyze a specific reaction. For example, only sucrose hydrolysis can be catalyzed by Enzyme sucrase.

General properties of Enzymes

* Enzymes initiate the biochemical reaction rate and accelerate it.

* The reaction in either direction can be accelerated by enzymes.

* Both enzymes have active sites involved in biochemical reactions.

* Enzymes, often Soluble in water, dilute glycerol, Nacl, and diluted alcohol, are very unstable compounds.

* At the optimum temperature, enzymes work aggressively.

* In nature, all enzymes are proteins, but all proteins may not be enzymes.

1) Holoenzyme

Ans ⇒ Holoenzyme is a complete, functional enzyme which is catalytically active. Holoenzyme consists of an apoenzyme together with its cofactors. Holoenzyme contains all the subunit required for the functioning of an enzyme eg: DNA polymerase III, RNA polymerase.

Holoenzyme = Apoenzyme + cofactor.

Holoenzyme is also known as a conjugate enzyme. The apoenzyme is the protein part of the enzyme, which is enzymatically inactive without cofactors.

A cofactor is the non-protein part of the holoenzyme, which is essential for its activity. Cofactors can be metal ions (Mg^{2+}, Fe^{3+}, Zn^{2+}) or organic molecules called coenzymes.

Most of the coenzymes are derived from vitamins. They act as a transient carrier of groups and transfer these groups in a biochemical reaction. Examples include:

* Coenzyme A (CoA) - It is derived from compounds such as pantothenic acid, etc. & carries acyl groups.

* Flavin adenine dinucleotide (FAD) — It is derived from compounds ~~such as pantothenic acid, etc~~ and ~~carries~~ acyl groups. Vitamin B2 (Riboflavin) and carries electrons.
* ~~Nicotinamide~~
* Nicotinamide adenine ~~dinu~~ dinucleotide (NAD) — Derived from nicotinic acid (Niacin) and carries hydride ions.

m) Structure of starch

Ans=) As mentioned earlier, it is a polymer of glucose molecules. It is present in plants in the form of starch granules. Starch is made up two components both of which have different structures;

- Amylose
- Amylopectin

~~A~~ Amylose

It is also sometimes called amylose starch. It is a polysaccharide made up of alpha-D-glucose monomers. Amylose makes around 20-30% of starch. It is an unbranched compound having linear chains of glucose molecules. These glucose molecules are

linked via alpha 1-4 glycosidic bonds.

Amylose starch is a linear chain of alpha D-glucose subunits that usually contains around 300 to 3000 glucosyl residues or even more.

This amylose chain can exist in one of the three forms;

* Disordered amorphous chain
* A or B forms
* V form.

The A and B forms are helical or spiral in appearance. Both these forms have similar structures. These are the left-handed helices having around six glucose molecules in each turn. The term left handed means that when the spiral is rotated clockwise, it turns towards the observer. These spiral helices of amylose can also wind around each other forming a double helix.

The V form of amylose is formed when it interacts with some hydrophobic or non-polar compounds like fatty acids, lipids, iodine or amlopectin.

Amylose in starch is present in V-form after interacting with amylo-pectin.

Amylopectin

It is also called as amylopectin starch. Amylopectin makes around 70-80% of starch. It is a branched polymer of alpha D-glucose subunits that are linked via the same 1-4 glycosidic bonds as in amylose. However, amylopectin also has alpha 1-6 glycosidic bonds among the glucose molecules at the it branch points.

Amylopectin shows branching after each 24 to 30 glucose subunits. Each branch also contains around the same number of glucose subunits. All the glucose subunits in a single branch are attached via alpha 1-4 glycosidic bonds except the first one. The first glucose subunit of each branch is linked to the parent chain via alpha 1-6 glycosidic bond.

Within the starch granules, amylopectin interacts with amylose in its V-form.

Starch molecules in plants are present in the form of semi-crystalline granules. The size of starch granules varies from one species to other. For example, the starch granules in rice are around 2 micrometers while those present in potatoes are up to 100 micrometers.

Write in 2 to 3 lines only (any Ten)

2) Phospholipids

Ans=) A phospholipid is a type of liquid molecule that is the main component of the cell membrane. Lipids are molecules that include fats, waxes, and some vitamins, among others. Each phospholipid is made up of two fatty acids, a phosphate group, and a glycerol molecules.

3) Peptide bond

Ans=) A peptide bond is an amide type of covalent chemical bond linking two consecutive alpha-amino acids from C1 of one alpha-amino acid and N2 of another, along a peptide or protein chain.

4) D.P.D

Ans=) The value of wall pressure at any moment is equal to the turgor pressure and it tends to force the water out of the cell against the osmotic entry of water into the cell. The net force with which water is drown in the cell is the difference between the osmotic pressure of the cell and the wall pressure (or turgor pressure). This force is called suction pressure or diffusion pressure deficit. (DPD).

5) Imbibition

Ans⇒ A adsorption of water by the dry hydrophilic colloids is called imbibition. It is a physical process which is involved in the movement of waters. This is also a type of diffusion which is performed like osmosis. ~~In this~~

6) ~~6)~~ Osmotic potential

Ans⇒ osmotic potential is defined as the ability of a solution to suck water in if it was saparated from another solution by a semipermeable (meaning water gets through, but not the solution) membrane. Osmosis is always ~~reff~~ referred to living cells.

7) R.Q.

Ans⇒ The ratio of the volume of CO_2 released to the volume of O_2 taken in respiration is called as respiratory quotient and it's denoted ~~by~~ as R.Q.

$$\text{Respiratory Quotient (R.Q)} = \frac{\text{The volume of } CO_2 \text{ liberated}}{\text{The volume of } O_2 \text{ used}}$$

It can be fined out through respiratory quotient that which food materials is being oxidized during respiration. because the different food materials (carbohydrate, fats, protein etc.)

25) Turgor pressure

Ans=) When the plant cell is placed in the hypotonic solution, water enters the cell as the result of osmosis, which results in a hydrostatic pressure called the turgor pressure (TP), which presses on the cell wall.

27) Fermentation

Ans⇒ Anaerobic breakdown of carbohydrates and other organic compounds with the help of enzymes secreted by microorganisms is called fermentation. The term fermentation is coined by Cruickshank in 1897.

34) Transpiration

Ans⇒ Loss of excess water in the form of vapours from the surface of the aerial parts of the plant is known as transpiration

35) Root Pressure

Ans⇒ The pressure developed in the Xylem cells by the absorption of water through root hairs is called root pressure. The water ascends in the Xylem vessels and tracheids due to root pressure.



BK

Department of Botany, Nabira Mahavidyalaya, Katol.

NABIRA MAHAVIDYALAYA, KATOL

Subject - Botany

Session: 2023-22

Class B.Sc. 3rd Year

Sem - VI

Assignment Submission

Sr. No.	Name of student	Paper-I	Paper-II
		Date & Signature	Date & Signature
1	Aadesh Dhanraj Dhengre	Aadesh	Aadesh
2	Achal Sanjayrao Watane	watane	watane
3	Akshay Suresh Mahant	A.mahant	A.mahant
4	Amisha Amrut Dambhare	A.A.Dambhare	A.A. Dambhare
5	Ashwini Shudhodhan Rakshit	A.rakshit	A.rakshit
6	Bhagyashri Sanjay Choudhari	B.chaudhari	B.chaudhari
7	Bhagyshri Anil Wangal	B.A.wangal	B.A.wangal
8	Deepali Harichandra Thombre	DHT	DHT
9	Durga Guruchandra Wankhede	durga..	durga..
10	Himanshu Harichandra Naik	hnaik	hnaik
11	Hina Udebhan Ninave	hina	hina
12	Isha Liladharrao Gharad	I.L.Gharad	I.L.Gharad
13	Janhvi Rajesh Tatte	J.Tatte	J.Tatte
15	Janvi Sudhakar Kakde	Janvi.k	Janvi.k
16	Jay Sanjay Potpite	Jay	Jay
17	Jayashri Naresh Barai	Jayashri Barai	Jayashri.Barai
18	Khushi Bhupendragiri Goswami	khushi.G	khushi.G

19	Mahima Gunvanta Choudhari	Mahima	Mahima.
20	Mona Damodhar Parkhi	MParkhi.	MParkhi
21	Priyanka Mahesh Bondre	P.M. Bondre	P.M. Bondre
22	Rahul Sahebrao Balpande	RSBalpande	RS Balpande
23	Raksha Shriram Kothe	Raksha	Raksha
24	Riya Diliprao Bangare	RBangare	RBangare
25	Ruchika Sunil Dhawale	R.DDhawale	R.D Dhawale.
26	Sahili Anandrao Gajbhiye	Sahili.	Sahili.
27	Sakshi Prabhakar Dhote	Sakshi	Sakshi
28	Sakshi Shriram Kale	SKale	SKale.
29	Sejal Kailas Wahane	SKW	SKW
30	Shital Vijay Rewatkar	SRewatkar	SRewatkar
31	Shraddha Gopal Gore	Sgore	Sgore
32	Swati Maroti Wankhede	S.M. Wankhede	S.M. Wankhede.
33	Toshal Dhanraj Fule	ToshuFule	ToshuFule
34	Vaishanavi Kisanaji Choudhari	Choudhari	Choudhari
35	Vaishanavi Sudhakr Walke	VSwalke	VSwalke
36	Vedinee Sanjay Tathode	Vedistathode	Vedistathode

Collage :- Nabira Mahavidhalaya Katol.

Class :- BSC III rd Year (CBZ)

Sem - VI

Sub :- Botany Paper - I

Assignment

Year :- 2023-24

Name :- Janvi. S. Kakde

Introduction of Genetic Engineering

- The manipulation of genetic makeu of living cells by inserting desired genes through a DNA vector, is called as "genetic engineering."
- Genetic engineering has been gainin important over the last few years.
- It will become more important in the current century as genetic diseases become more prevalent and agricultural area is reduced.
- Genetic engineering plays significan role in the production of medicin
- Genetic Engeering is the artificial manipulation & alteration of genes.

History of Genetic Engineering.

- **1973 :-** Genetic engineering is the science of manipulating genetic material of an organism. The first artificial genetic modification accomplished using biotechnology was transgenesis the process of transferring gene from one organism to another, first accomplished by Herber Boyer and Stantey Cohen in 1973.
- **1974 :-** The first genetically modified animal was a mouse created in 1974. by Rudolf Jaenisch.
- **1976 :-** In 1976 the technology was commercialised with the technology was commercialised, with the advent of genetically modified bacteria that produced somatostatin followed by insulin in 1978.

History of Genetic Engineering

- **1983 :-** In 1983 an antibiotic resistance gene was inserted into tabacco, leading gene of the genetically engineered plant.

- **1992 :-** Advances followed that allowed scientists to manipulate and add genes to a varitey of different organisms and induced a range of different effects. Plants were first commercialized with virus resistant tabacco released in china in 1992.

- **1994 :-** The first genetically modified food was the flavr savr tamato marketed in 1994.

- **2000 :-** In 2000 a paper published in science introduced golden rice, the first food develop with increased nutrient value.

Milestone of Genetic Engineering

- 1928 :- Freid crifth provides evidance for a genetic transformation factor (DNA)
- 1944 :- Avery, macteod and macarty DNA is the genetic material.
- 1952 :- Hersley and chese also determine that DNA is the genetic material.
- 1953 :- Watson and chrick determine the stucture of DNA
- 1970 :- first restriction endonuclease Isolated.
- 1973 :- Beirds and cohen estiblish Recombinant DNA Technology.
- 1976 :- DNA sequencing technique developed.

- 1980 :- U.S. Supreme court rules that genetically modified micro-organisms can be patanted.

- 1976 :- Wailterfires was the first to estiblished the complete nucleotid sequence of a viral RNA comprised the first pair only.

- 1983 :-
  Polymerase chain Reaction, invented by Kary, mulls revolutionized DNA genetic manipulation.

- 1996 :- Dolly the sheep, the first clon mammal, showcased the potential of reproductive cloning.

- 2003 :- The mapping of the entire human genome laid and the groundwor for understanding genetic · compaints and disease.

- 2012 :- Jannifer Doudna and Emmanuell Charpentires breakthrough in gene· editing technology made precise·

- 2017 :- CRISPR-based gene therapies began showing promise in treating genetic disorders, opening new medical possibilities.
- 2020 :- Advances in synthetic biology allowed the creation in artificial DNA and the design of organism with specific functions.
-

Recombinant DNA

Defination :-

"DNA that has been formed artifica by combining constituents from different organism" is called Recombinant DNA.

"Recombinant refers to the DNA whic is obtained by joining DNA from differe source.

History Recombinant DNA :-

The first recombinant DNA (rDNA) molec were generated in 1973 by paul Berg, Herbert Boyer, Annie chang, and Stanley cohen of Stanford university and universi of California San francisco.

Stanley cohen and Herbert Boyer's historic experiment used technique to c and paste DNA to create the first custom-made organism containing recombinant or recombinant DNA.

Recombinant DNA technology is popularly known as genetic engineering. The recombinant DNA technology emerged with the discovery of restriction enzyme in the 1968 by swiss microbiblogist Werner Arber, Inserting the desired gene into the genome of the host is not as easy as it sound.

Milestone of DNA (rDNA) technology

- 1970 :- Identification of enzymes that can cut DNA at specific sequences enabling gene splicing.
- 1972 :- Introduction of circular DNA molecules (plasmids) as carries for foreign genes, aiding gene cloning.
- 1973 :- Creation of the first recombinant DNA molecule by splicing a gene into a plasmid.

- 1977 :- Sanger sequencing revolutionized the ability to read DNA sequence, crucial for understanding gene structure.

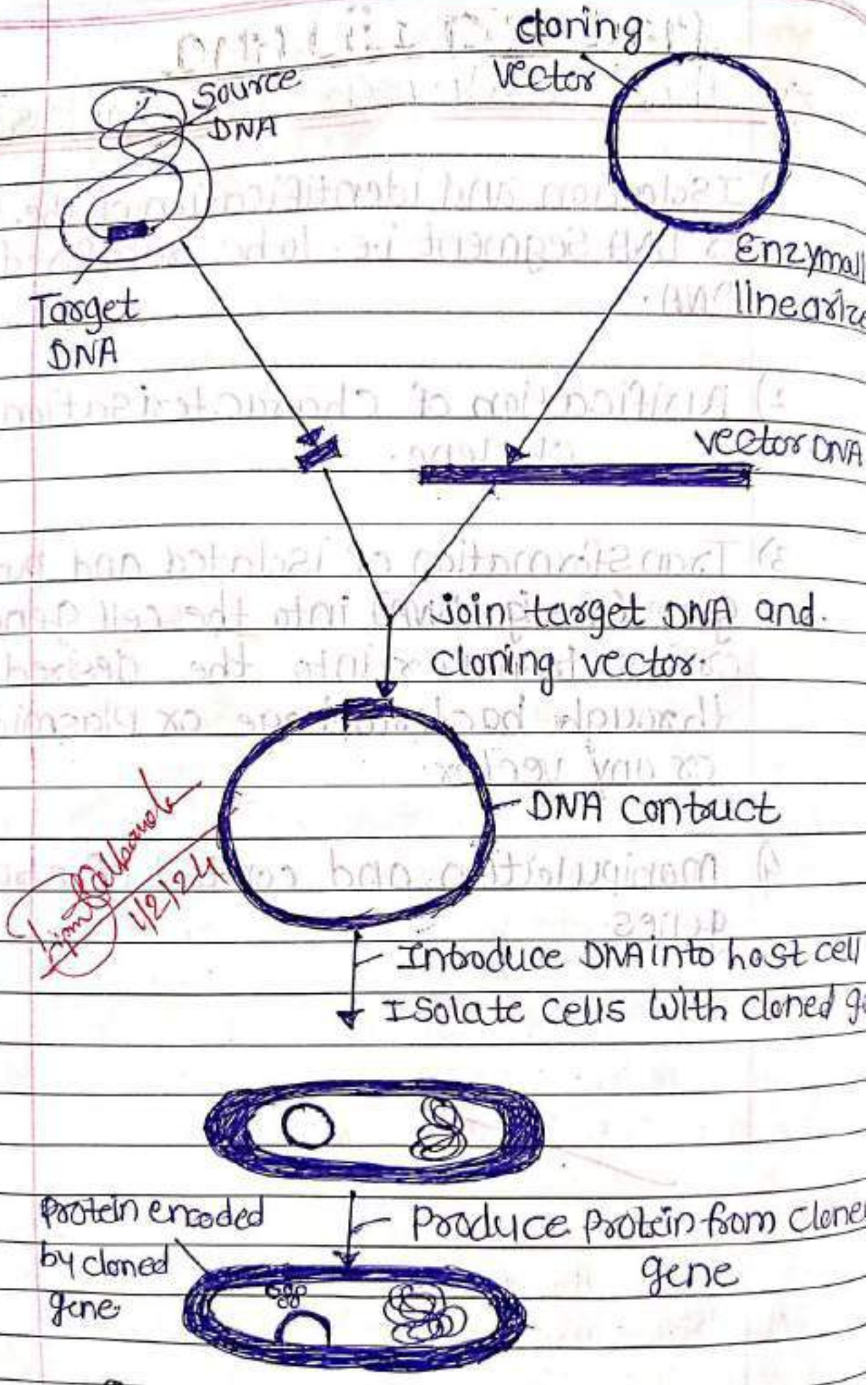
- 1978 :- successful expression of foregin genes in bacteria, a crucial step for producing proteins through genetic engineering.

- 1983 :- Invention of PCR by Kary mullis allowed amplification of DNA a break through for cloning and.

- 1990 :- Initiatives like the Human Genome project marked the beginning of comprehensive genome sequencing efforts.

- 2012 :- Emergence of the technology of revolutionary CRISPR-Cas9 gene editing tool allowing precise and efficiant manipulation of gene.

These milestones collectively shaped the field of rDNA technology, contributing to advancements in medicine, agriculture and various other scientific domains



Recombinant DNA cloning procedure

Plasmid Isolation

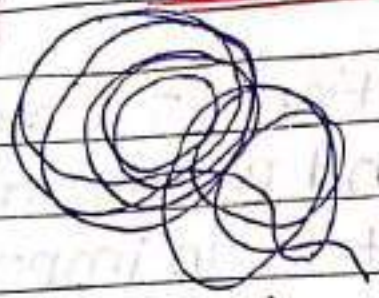
- A plasmid preparation is a method of DNA extraction and purification for plasmid DNA, it is an important step in many molecule biology experimen and is essential for the successful use of plasmids in research and biotechnology many methods have been developed to purify plasmid DNA from.

Alkaline lysis is the core plasmid isolation principle. Lysis is the process of breaking down a cell membrane. Alkaline refers to the PH of the solution used to Lyse the cell membrane. Alkaline lysis is chemical lysist that uses high PH reagents to disrupt the proteins in the cell membrane.

The procedure are based on the fact that plasmids usually occur in the covalently closed circular (super coiled) ccc configuration within the host cells. After gentle cell lysis all intracellular macromolecules have to be eliminated.

Date

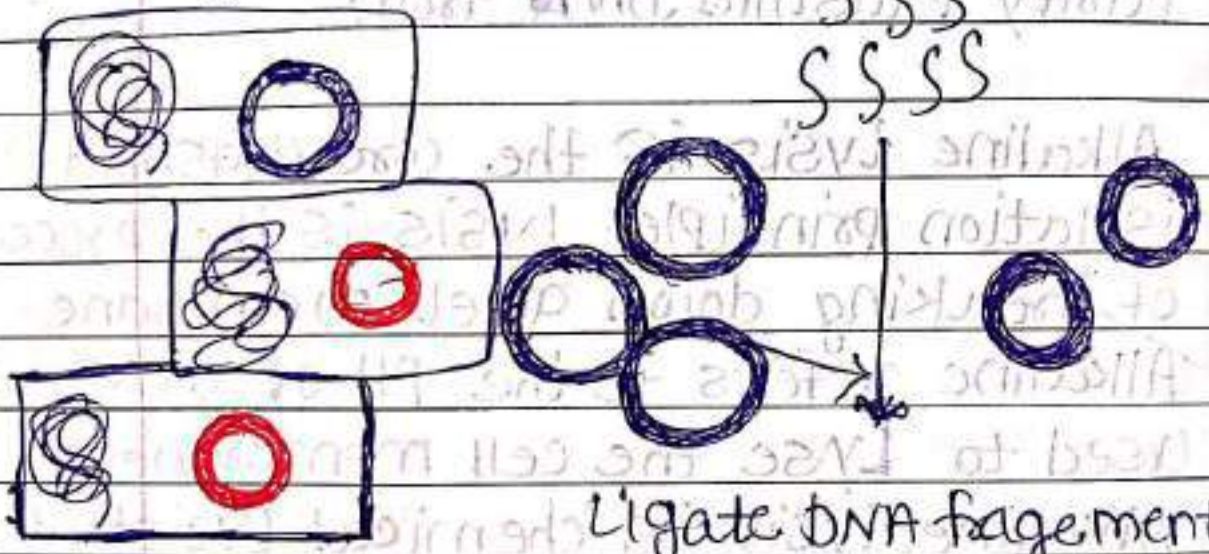
DNA Library Diagram



Genomic DNA

fragment using restriction enzyme

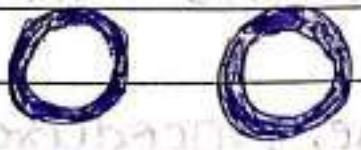
making a DNA library



Ligate DNA fragement into Plasmid Vectors.

E.coil cells with recombinant plasmid

Transform into E.coil



Making a DNA library

20/8/24

Department of Botany

Unit Tests

Academic Session

2023-24

PAGE No.

DATE 26/02/24

Department of Botany

"B.Sc. Sem - II P-II"

"Unit Test on Unit -I"

Q:1) Differentiate Between Tap Root & Adventitious Root System. (5)

Q:2) Define types of modifications in tap root system. (5)

Q:3) Define types of modifications in adventitious root system. (5)

Dr. B. B. Kalbande
Asst. Prof. & Head
Department of Botany,
Nabira Mahavidyalaya, Katol.

26/02/2024 Sem-II : P-II : U-I

Unit Test Presently

DATE : / /

PAGE No. :

Botany

1) Maniza M. Bapai — M Bapai
2) Anjali D. Sembalekar — Sembalekar
3) Tina. Maharaja — R Maharaja
4] Komal Chaudhari — Chaudhari
5] Chanda R. Rathod — C. Rathod
6] Sakshi S. Vyawahare — S.S. Vyawahare
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20] Priya G. Sirsam — P Sirsam
21] Sakshi S. Siram — Sirsam
22) Kaunali P. Bodhale — K Bodhale
23) Vishakha M. Uke — V.M. Uke

Name: Kapilansh .S. Mahorkar. (7/15)

apsara

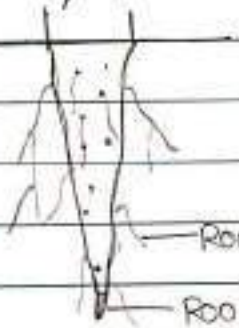
Date: 26/02/24

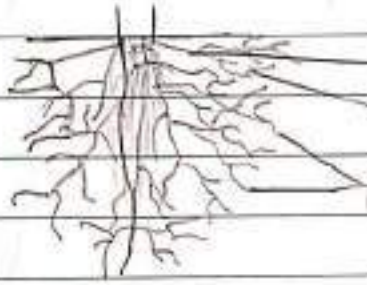
Class: B.Sc 1st yes Sem-II (CBZ).

Q.1.

Tap root	Advantetious root
i) Occurs in dicots	i) occurs in monocots.
ii) It is long, penetrate ~~int~~ deep into the soil.	ii) It is Branched.
iii) It developed from radicals.	iii) It developed from node or internode.
iv) Example: ~~the~~ Mango, Banyan trees.	iv) Example: Wheat plants.
v) It has root cap	v) It has not root cap.

(3)

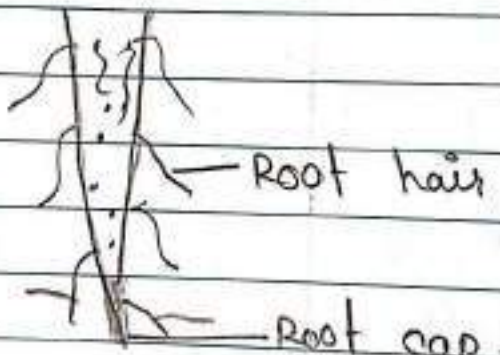




Q.2. dicotor ~~monocot~~ dicot ~~monocot~~

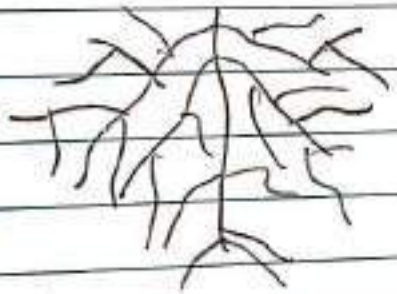
→ i) It go mainly occors in
ii) It is long, cylindrical & ~~go~~ goes deeper into the soil.
iii) It + developed from radicals.
iv) It has root cap for protection root end.
v) Because of that, It stronger than advantitious root:
vi) It developed directly from embryo.

Examples: Mango trees



3.
→ i) It mainly occurs in monocot plants.
ii) It is branched & not goes deeper in soil.
iii) It developed from ~~no~~ either node or internode or both.
iv) It has no root cap.
v) Therefore, It is weeker than tap root.
vi) It holds more soil than tap root.

Example: Wheat plants.



4/15

PAGE NO.
DATE / /

* Name :- Vishakha Mahesh Uke
* College : Nabira Mahavidhyalaya Katol
* Class :- Bsc 1st year (CBZ)

---

① Differentiate between tap root & adventitious root system

1) tap root	
① roots are growth of secondary & tertiary growth system of the root.	
② roots are generally tap roots system are used.	
③ nutrients and minerals of proteins in the plant.	
④ taping the root in the soil.	
⑤ roots are absorb the water and plant growth are highally	
⑥ roots are modification of the plant.	
⑦ ~~roots~~ plants protecte the root system.	
2) adventitious root system	
①	

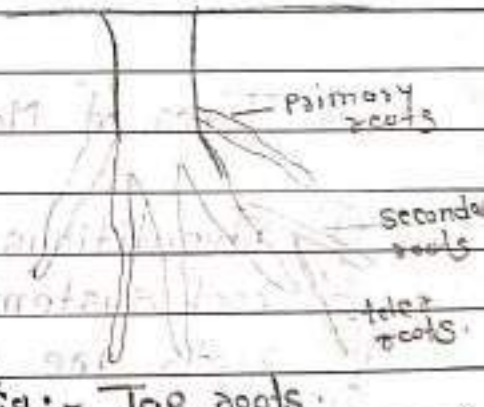


fig :- Tap roots.

PAGE No.
DATE / /

2) Types of Modification in tap root system

(1) Modification of tap roots system in the plants.
(2) tap roots are proteins and minerals is plant.
(3) roots are protecte the plants system.
(4) roots are develops in the radicals
(5) roots are under the soil and pto plants are protecte of roots.
(6) plant growth of high ~~reason~~ resenes roots are protective system.

3) Types of Modification in adventitious root system.

(1) adventitious root are very great.
(2) root system is the strong of plants
(3) roots are protected the plant and plant growth.
(4) plants is

27/02/2024

"Department of Botany"

B.Sc. Sem-IV : P-II : U-I

Unit Test

Q:1) Explain with example, "Law of Segregation". (10)

Q:2) Explain with example "Law of Independent Assortment". (10)

Dr. B. B. Kalbande
Asst. Prof. & Head
Department of Botany,
Nabira Mahavidyalaya, Katol.

Botany

B.Sc. IV Sem. P-I. U-I

Date :- 27/02/24

1) Lakita U. Makde
2) Tina S. Yelekar
3) Khushali D. Thombare
4) Anjali R. Dhongade
5) Purva S. Kharpkar
6) Vaishnavi L. Nibade
7) Janhavi N. Mehar
8) Kalyani B. Babhulkar
9) Mitali M. Gajbhiye
10) Aparna G. Chinchmalatpure
11) Dhanshri S. Nanote
12) Pooja A. Dambhale
13) Neha N. Patil
14) Jayashri A. Raut
15) pratiksha D. Aule
16) Ruchika P. Malvi
17) Chhakuli M. Gudulo
Sejal N. Wasule
Sameer S. Ansari

Name:- Chhakuli Madhav Wadule.

Class:- BSc 2nd year.

Page No.
Date: / /

14/15

Que. 1] Laws of segregation:-

Laws of segregation can be explained with the help of Monohybrid cross: In this cross their are one characters cross with each others.

Parents :- Tall × Dwarf (Phenotypic ratio)

Gametes :- TT × tt (Genotypic ratio)

02

F1 generation :- [TT] × [tt]

[Tt]

all tall plant.

Gametes :- [T] [t]

↓ selfing

F_2 generation.

♀ / ♂	T	t
T	TT	Tt
t	Tt	tt

Page No.
Date: / /

Phenotypic ratio :- 3 : 1
Genotypic ratio :- 1 : 2 : 1

Number of individuals	Phenotypic	genotypic
3	T	TT, Tt, Tt
1	Dwarf	tt

(5)

2) Law of Independent Assortment.

This law can be explained with the help of Dihybrid cross; In this cross. their are two plant characters cross with each other. we gets a one character of a colour. Dominant colour is yellow and Reccessive colour is greep and another with a charact of shape Dominant is Round and recessiv is wrinkled.

Colour :- YY yy
yellow Green.

Shape : RR rr
Round wrinkled.

Page No.
Date: / /

Parents : YYRR × yyrr. Genotypic.
yellow Green Phenotypic
Round wrinkled.

Gametes :- YYRR × yyrr.

F1 generation :- YYRR × yyrr.

(YR) (Yr) (yR) (yr)

(5) gametes :- YR Yr yR yr.

↓ selfing.

F2 generation :-

♀ \ ♂	YR	Yr	yR	yr
YR	YYRR yellow round	YYRr yellow round	YyRR yellow round	YyRr yellow round.
Yr	YYRr yellow round	YYrr yellow wrinkled	YyRr yellow Round.	Yyrr yellow wrinkled
yR	YyRR yellow round	YyRr yellow round	yyRR green round	yyRr green Round.
yr	YyRr yellow Round	Yyrr yellow wrinkled	yyRr green round	yyrr green wrinkled

Phenotypic Ratio :- 9 : 3 : 3 : 1
Genotypic Ratio :- 1 : 2 : 2 : 4 : 1 : 2 : 1 : 2 : 1

Number of individuals	Phenotypic	genotypic
9	Yellow Round	1 YYRR
		2 YYRr
		2 YyRR
		4 YyRr
3	yellow wrinkled	1 YYrr
		2 Yyrr
3	green Round	1 yyRR
		2 yyRr
1	green wrinkled	1 yyrr

(V)

Phenotypic Ratio — 9 : 3 : 3 : 1

Yellow Round : yellow wrinkled : green : green wrinkled

Genotypic Ratio

1 : 2 : 2 : 4 : 1 : 2 : 1 : 2 : 1

27-2-2024

Name :- Mitali Mahadeo Gajbhiye
Subject :- Botany - II
Class :- B.Sc 2nd year (CBZ)

05/15

Q-1 :- Monohybrid cross

→ Gametes TT × tt
Tall dwarf

Cross

F1 generation Tt

T t

Pigment Table :- ~~TT Tt tt tt~~

(2)

♀ / ♂	T	t
T	TT Tall	Tt Tall
t	Tt Tall	tt dwarf

TT : Tt : Tt : tt

Phynotype ratio :- 3 : 1
Tall dwarf

Genotype
~~Phynotype~~ ratio :- 1 : 2 : 1
TT : Tt : tt

• Dihybrid cross

→ Gametes – YYRR * yyrr

Yellow round — green round

F1 generation — YyRr

YR (Yellow round) | Yr (Yellow wrinkled) | yR (green round) | yr (green wrinkled)

Pigment Table :-

♀ \ ♂	YR	Yr	yR	yr
YR	YYRR Yellow round	YYRr Yellow round	YyRR Yellow round	YyRr Yellow round
Yr	YYRr Yellow round	YYrr Yellow wrinkled	YyRr Yellow round	Yyrr Yellow wrinkled
yR	YyRR Yellow round	YyRr Yellow round	yyRR Yellow round	yyRr Yellow round
yr	YyRr Yellow round	Yyrr Yellow wrinkled	yyRr Yellow round	yyrr Yellow green wrinkled

YR : Yr : yR : yr

Genotype ratio :- 1 : 2 : 2 : 4 : 1 : 2 : 2 : 1

Phenotype ratio :- 3 : 3 : 1

"B.Sc. Sem-VI"
UNIT TEST

19/04/24
Saturday.

UNIT II

Q. Write a short note on the following.

1. Another culture
2. Shoot tip culture.
3. Callus culture.
4. protoplast culture.
5. Give at least two applications of each technique mentioned above (compulsory)

Sr No.	Name of student	Sign.
1)	Deepali H. Thombare	D.H. Thombare
2)	Amisha A Dambhare.	A Dambhare.
3)	Ruchika S. Dhawale	Dhawale
4)	Mahima G. chaudhari	Ghaudhari
5)	Bhagyashri S. chaudhari	Ghaudhari
6)	Bhagyashri A. Wangal	B Wangal
7)	Sakshi P. Dhote.	S.P. Dhote
8)	Khushi. B. Goswami	K.B Goswami
9)	Janhvi · R· Tatte	Tatte.
10)	Isha · L· Gharad	Isha.
11)	Jay . S . Potpite	JPotpite

Unit Test - Unit - II 13-04-24
Botany P-I
→ Khushi. B. Goswami

04/10

Q.1) Write a short note on the following.

i) Anther culture :-
- Anther culture is a technique in which the developing the anther at precise and critical stage are excised from unopened flower bud and cultured on a nutrient medium.
- The culture anther developed into callus tissue or embryonic that give to haploid plantlet through organogenesis.

02

ii) Shoot tip culture :-
- Shoot tip culture is a technique in which the developing the small piece of shoot of meristem can lead to formation of organised shoot which can be rooted.
- In this technique apical shoot meristem are cultured. Apical shoot meristem are differ from shoot apex in apical meristem.
- It is also known as meristem cultured meristem cultured involve the development of already existing shoot meristem which ultimately developed adventitious root.

iii) Callus culture :-

→ Callus ~~culture~~ has been artificially developed through tissue cultured technique. During callus culture 2-3 mm sterilized piece of explant is transferred into nutrient medium and incubated at 25-28°C in a alternate light and dark period of 12 hours. abnormal growth of callus has potentially developed roots.

iv) protoplast culture :-

→ In protoplast culture. protoplast is the biological active and most significantly material of cells. when cell wall is mechanically or enzymatically removed the isolated protoplast is known as naked plant cell. on which most of recent reserched are based.

06/10

Unit Test

Name:- Mahima CH. Choudhari

Class:- B.Sc III ed. year (CB2)

1. Anathee culture

Ans:- Anathee culture is techq technique by which the developing anthee at a precise and from unopened flowee bud and aee cultureed on a nutrient medium where the microscope within the culture anather developed callus tissue or embeyonic that give rise to haploid plant-let either theough oeganogenesis or embeyo genesis Anather and pollen grain aee cultureed to produce haploid plants the anathee contain diploid (2n) Number of chromosome (2)

2] Shoot tip culture-

Ans:- A small piece of shoot of meristem can lead formation of oeganised of shoot which can be rooted. In shoot culture apical shoot meristem. aee cultured Apical shoot meristem aee differe from shoot apex in apical meristem and few leaf premodia (2)

- Because in these cultured meristem is used.
- It is also known as meristem cultur

Meristem cultured involved the development of already existing shoot meristem which ultimately development adventitious shoot from development shoot.

5] callus culture

callus culture may beep artificially developed through tissue culture techque using callus culture 2-3 mm sterilized piece of explant is transferred into nutrient medium and inaculated at 25°-28°C in an alternal light and dark period of 12 hour

4] protoplast culture

Ans- protoplast culture

NABIRA MAHAVIDYALAYA, KATOL

SESSION 2023-24

SEM-I . BOTANY

DATE: 03/11/2023

Que1: (a) Sexual Reproduction in Albugo.

(b) General characteristics of fungi

OR

(c) Gametangia in Mucor

(d) Harmful characters of fungi.

(e) Asexual reproduction in Cercospora.

(f) Teliospores in puccinia

Q2: a) Economic importance of Lichen.

b) Types of lichens.

OR

(c) Red rot of sugarcane

(d) Leaf curl of papaya

(e) ~~Puccinia~~ V.S. apothecium of Lichen (diagram only)
Vegetative reproduction

(f) ~~Importance~~ of Lichen

Q3: (a) Antheridiophore in Marchantia

(b) sporophyte of Funaria.

OR

(c) L.S. Anthoceros sporophyte (diagram only

(d) L.S. Male gametophores in Funaria

Zygospore

NABIRA MAHAVIDYALAYA, KATOL

BSc sem - I

session 2023-24

Test

Attendance Sheet

Date: 03/11/2023

S. No.	Student Name	Signature
1	Sakshi Suryakant Vyawahare	S.S.Vyawahare
2.	Vishakha Mahesh Uke	V. M. Uke
3.	Ruchika Dharmraj Suryawanshi	Ruchika
4	Sudhanshu yuvraj Amale	Amale
5.	kapilansh. sanjay. Mahurkar.	Mahurkar
6.	Nikhil. Sanjiv Babulkar	Babulkar
7.	Chetan. Sureshrao Agarkar	Agarkar
8.	Komal Ramesh Chaudhari	Chaudhari
9)	Saloni Janardhan Manmode	Manmode.
10]	Gayatri pundlikrao Gharmode	Gharmode
11]	Tanvi Gajanan Pande	Pande
12]	Samruddhi devendra yeole	Yeole
13]	Riddhi vijay kalbande	Kalbande
14]	Janhavi wasudeo Gharad	Janhavi
15]	Vaishali Ramesh Chavhan	Chavhan
16]	Dimpal Hemraj Kalbande	Dimpal
17]	Chetna. Sunil. Bondre	Bondre.
18)	Srushti Ratnakar Dhok	Dhok
19)	Sakshi Narendra Fuse	Fuse
20)	Dipali. Dilip. Mahapure.	Mahapure
21)	Saloni Suresh Sirsam.	Sirsam
22)	Priya Govinda Sirsam	Sirsam
23)	Payal Vijay Shriramе	Shriramе
24)	Chetan shantaram Rewatkar	Rewatkar
25]	Rehan Hafeez Sheikh	
26]	Trupti Niranjan Charde	Charde
27]	Bharti. D. Raut	Raut
28]	Khushali S. Katlam.	Katlam
29)	Sanskruti. D. Meshram	S. D. Meshram

S.NO.	Student Name	signature
30)	Farhat Naz Sheikh Rasheed	Farhat.
31)	Sanakshi. Ishwar. shende	Shende
32)	Manikal Manohar Barai	Barai

Dr. R.S. Mishra

नबीरा महाविद्यालय, काटोल

10/50

परीक्षा

नांव Sudhanshu Yuvraj Amale

वर्ग Bsc-I year. विषय Botany रोल नं.

	1	2	3	4	6	एकूण
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	6.	7	8	9	10	
गुण						

तारीख 03 / 11 /२०२३ परीक्षकाची सही

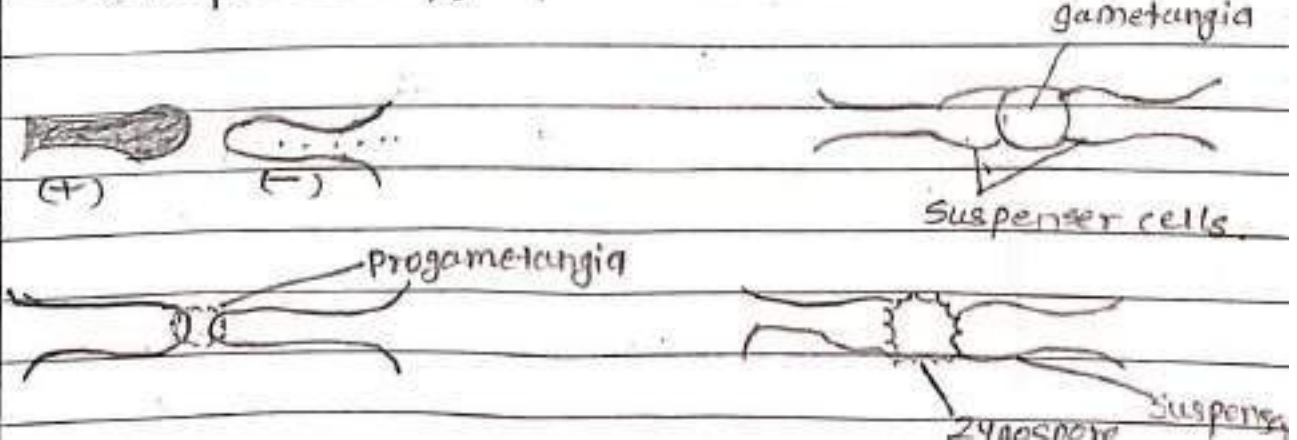
टिप : १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे.
२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.
३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये.
केल्यास दंडास पात्र होईल.

Que- 1(a) Sexual Reproduction In Albuga.

Ans:-

(C) Gametangia in Mucor.

Ans:- 1) When two heterocious hyphaes of Mucor close to each other it forms gametangia.
2) (+)Strain of hyphe and (−) strain of hyphe ovelaps head to head, and the form progametangia.
2) When the progametangia is forme it develops into gametangia. The nucleus of each strain fused.
3) after fertilization zygote is develope and develope in zygospore.



(f) Teliospores in Puccinia

1) Teliospores are develope in Telial stage of puccinia.

1/2 Teliospores are binucleate septate spores.

Ans:- i) Haustorium :- It is the outgrowth of hyphae inside host cell to absorb nutrition from them called Haustorium.

Ans:- ii) Disjuncture :- Disjuncter are the cells present in intercalary of conidia. they joints conidia to each othes.

Ans:- iii) Tikka disease :- The disease cause by the genus of Cercospora. In which the black, brown spot appears on leaf.

Ans:- (iv) Rhizines :- The root like structure present in the lichens for attachment called rhizines.

Ans:- (vii) Gemmae :- The '8' (eight) shaped vegetative body produce by Marchantia inside the gemma-cup.

Ans:- (x) poisonous mushroom :- The mushroom that are not edible to eat and they are poisonous to the health is called poisonous mushroom.

Ans:- (v) ~~Perigynium~~ :- Symbiosis :- The benifital association of algae or fungi is known as symbiosis.

NABIRA MAHAVIDYALAYA, KATOL

50 marks.

SESSION 2023-24

Sem III UNIT TEST

4/11/2023

Q1: (a) Benthitalian theory or concept.

(b) Phyto chemistry in relation to taxonomy.

OR

(c) Herbarium

(d) Enigmocarpon fruit

(e) Sahnianthus flowers.

(b) Bracketed key.

Q2: (a) Discuss Bentham and Hooker's system of classification along with its merits and demerits of the system.

(b) Floral characters of Malvaceae

OR

(c) Merit's and demerits of Engler & Prantl's system.

(d) Economic importance of Malvaceae

(e) Floral characters of Asclepiadaceae.

(f) Economic importance of poaceae.

Q3: (a) Describe the types of pollination.

(b) Development of polygonum type of embryo sac.

OR

(c) T. S. anther (diagram only)

(d) Onagrad type of embryo

(e) Adaptations for self pollination.

(f) Female gametophyte.

Q4: (a) Landscaping. Explain the role of landscaping.

(b) Explain the factors required for growing house plant.

OR

(c) Scope of landscaping at industrial premises.

(d) Explain how to grow and maintain Coleus blumei

(e) Explain how to grow care Dendrobium orchid.

(f) How to grow Rieger Begonia from seed.

Q5: (Any 10)

(i) ICBN

(ii) Cytotaxonomy

(iii) Floras

(iv) Polypetalae

(v) Bicarpellate

(vi) Curvembryeal

(vii) Exine

(viii) Double fertilization

(ix) Pericarp

(x) USDA

(xi) Areca palm

(xii) Ventilation.

Dr. R.S. Meshram
Dept. of Botany
NMV, Katol

NABIRA MAHAVIDYALAYA, KATOL

SESSION 2023-24

Sem-III BOTANY 4/11/2023

Sr.NO	Students name	Signature
1)	Rajshree Rajendra Rewatkar	Rewatkar
2)	Lakita Umesh makde	Lamakde
3)	Tina Sandip yelekar	Tyelekar
4)	Janhvi Namdev mehar	Jmeher
5)	Disha Anilrao Girpadkar	D.A.Girpadkar
6)	Anjali Ramdasji Dhongade	AnDhongade
7)	Ashwini Yadavrao kambale	Akambale
8)	Purva S. Khurpkar.	SKhurpk
9)	Hemlata R. kale	H.R.Kale
10)	Neha . N. Patil	Nehapatil
11)	Mayuri .P. Putarejya	
12)	Jayashri . A . Raut	Raut
13)	Shivani P. Mohankar	PMohankar
14)	Rasika A. Sirsam	RSirsam
15)	Kalyani B. Babhulkar	
16)	Vaishanavi L. Nibude	Vaishnavi
17)	Samar S. Aram	Samar S. Aram
18)	Aparna G. Chinchmalatpure	AChinchpure
19)	Mitali M. Gajbhiye	Majbhiye
20)	Sejal N. Wasule	Swasure
21)	Kamiksha C. Dongare	KDongare
22)	Shivprasad . P . Suryawanshi	Suryawanshi
23)	Chhakuli Madhav Wadule	Cwadule
24)	Ruchika Pramodrao Maluj	Rmaluj

Dr. R-S. Mishram

Date:- 04/11/2023

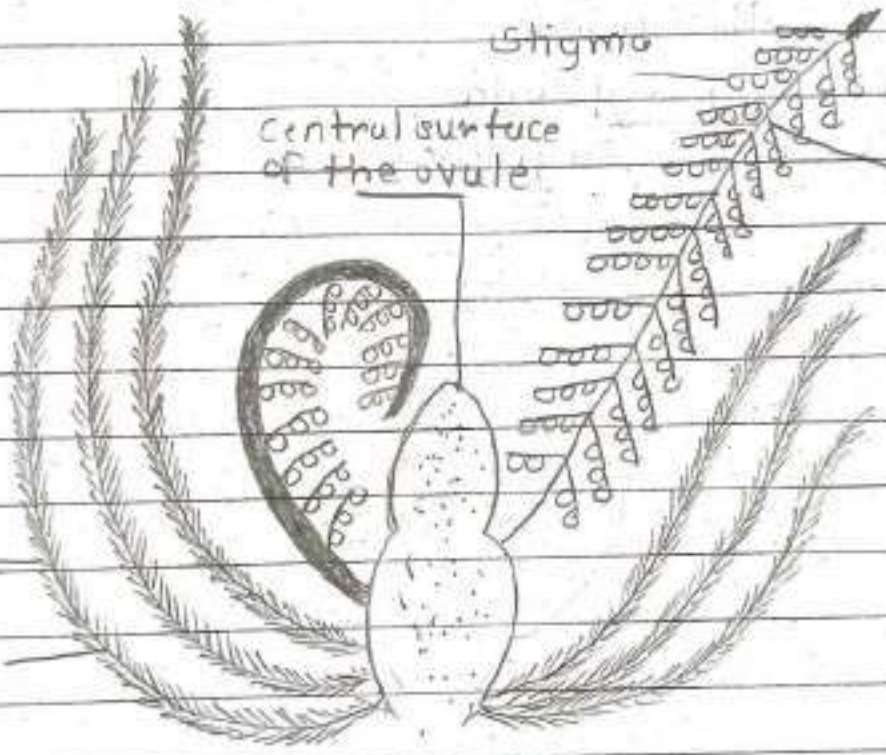
Name:- Chhakuli Madhavraji Wadule.

Class:- BSc 2d yr (CB2) Sub:- Botany (T)

Q. 1

Benettitalian theory.

(a)



The Cycadeoidea flower

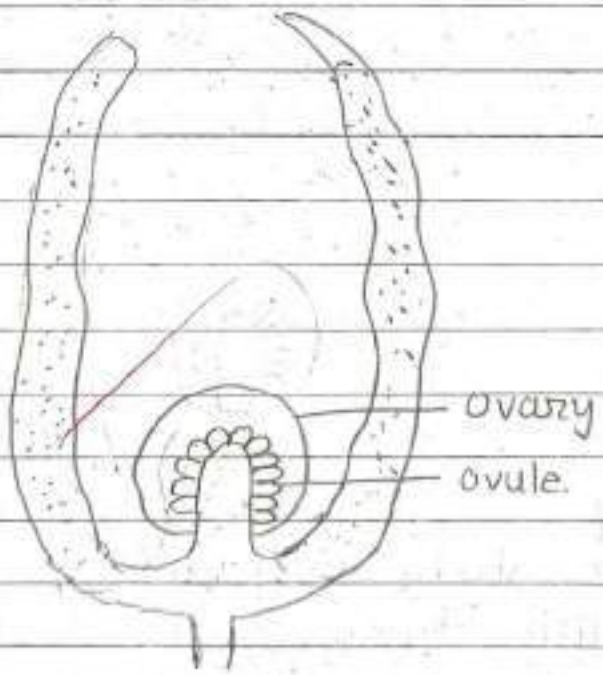
- Taxonomy
- It is the study of plant specimens by the use of scientific study.
- It is a the scientist Wieland (1904) The scientist

Q. 1

(e) Sahanianthus flower.

Division :- Spermatophyta.
Sub-Division :- Gymnospermae.
Class :- Dicotyledoae.
Sub-class - Polypetalae.
~~Fam~~ Order - Myrtales

1/2

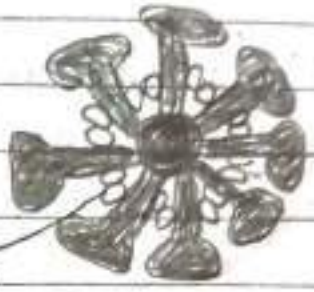


Sahanianthus flower.

(d) Enignocarpon fruit



(A)



(B)

1/2

Q(3) Describe the types of pollination.

- Self pollination:- It is a type of pollination The onthers and stigma are occurs same plants are called Self Pollination.
  e.g sunflower maize.

1/2

- Cross Pollination.
  It is a types of Pollination the anthers and stigma are occurs different plants called cross pollination
  e.g Cucurbita.

Q. 5

(i) ICBN
International Code of Botanical Nomenclature.

(ii) Cytotaxonomy.
It mean. the study of Plant specimens of the cell. by the scientific study.

(iii) Floras.
is The study of flower and their classification

(iv) Polypetalae
The free petalls of a flowers is called Polypetalae.

(vii) Exine
It is the outermost layer of cells.

Page No.
Date :

05/50

नबीरा महाविद्यालय, काटोल

परीक्षा _____

नांव Sameer S. Ansari

वर्ग BSc III Sem विषय Botany - I रोल नं. _____

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गुण						
	6	7	8	9	10	
गुण						

तारीख : 4 / 11 /2023

परीक्षकाची सही

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे.
२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.
३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

Q.1 → (e) · Sahanianthus · flower :-

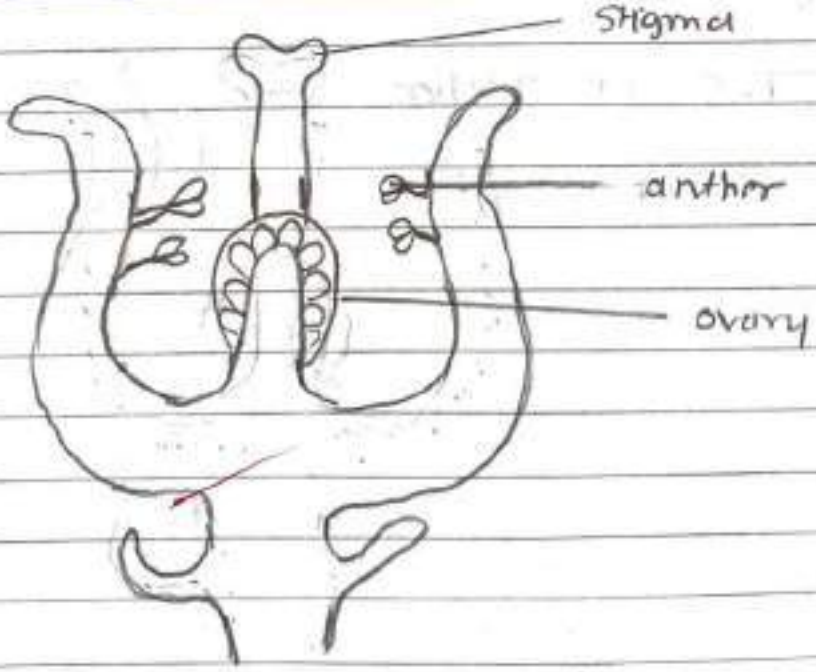


fig. Sahanianthus. flower

Q.2 (d) Enigmocarpon fruit :-



fig. Enigmocarpon fruit

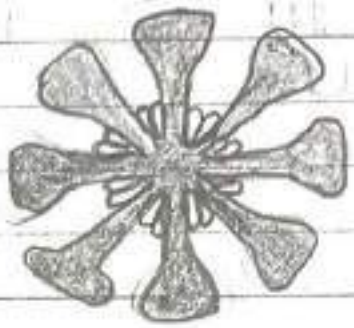
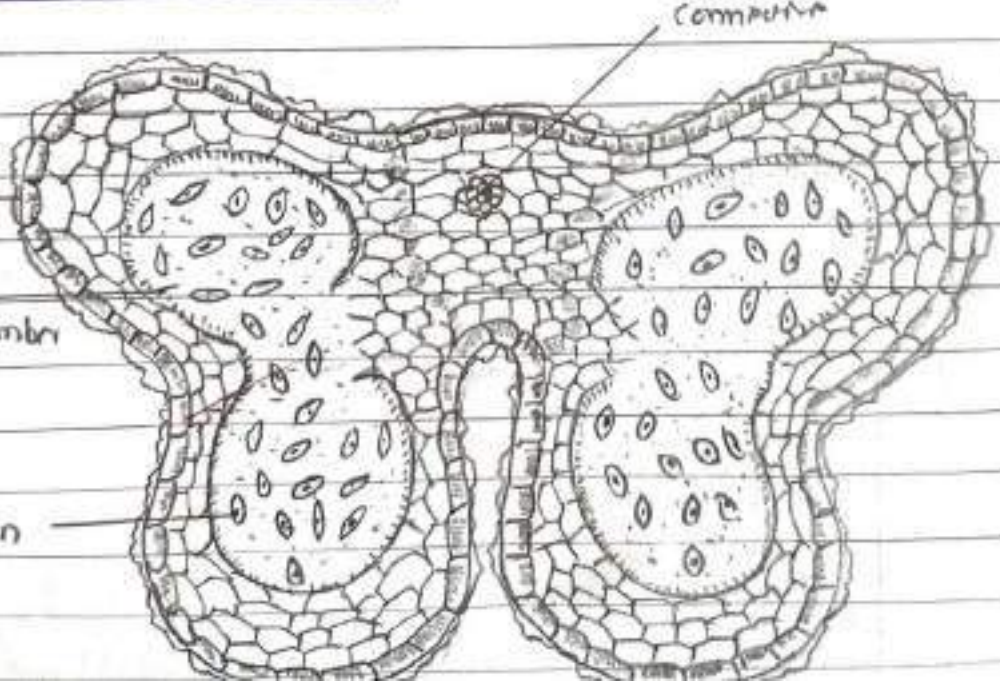


fig. ovule of Enigmocarpon fru

Q.1 (c) Herbarium :-

- Herbarium is a method of preservation of species.
- Herbarium is used to prisear plant material

Q.2 (c) T.S. of anther :-



Q.4 (a) Landscaping :-

- The landscaping is very important.
- In Specific areas to planted attractive or useful plants is known as landscaping.
- It is used in decreasing air pollution.

Q.5 (i) ICBN

International code of botanical Nomenclature

(ii) Cytotaxonomy :-

Cytotaxonomy is advance study or detailed study of plant plants

(iii) Floras

Floras is study of plants in Specific areas or location

(iv) Polypetalae :-

- polypetalae means, petals are free

(v) Bicarpellate :-

- There are two carpal present in plants flowers,

(vii) Exine :-

Exine is outer layer of pollen grain

(viii) Double fertilization :

- Double fertilization is occurin angiosperm plants in angiosperms flour after pollination, the pollen grain germinate pollen tube; and the pollen tube contain two male gametes and one vegetative nucleus, the male gamete fuse with egg and vegetative nucleus fuse with two polar nuclei. these type of fertilization is called Double fertilization.

NABIRA MAHAVIDYALAYA, KATOL
SESSION - 2023-24
Sem V UNIT TEST

Date: 04/11/23

Q1: (a) Munch mass flow hypothesis

(b) Explain Active absorption of Mineral with reference to carrier concept.

OR

(c) K^+ malate hypothesis.

(d) Diffusion

(e) Significance of osmosis

(f) Types of transpiration.

Q2: (a) Hatch-Slack pathway.

(b) Non-cyclic photophasphorylation.

OR

(c) C_3 cycle (diagrammatic)

(d) Red drop mechanism.

(e) Photosynthetic pigments.

(f) ~~Factors~~ TCA cycle (diagrammatic)

Q3: (a) Explain the mechanism of Biological N_2 fixation

(b) What is plant movement? Explain tropic movement

OR

(c) Circadian Rhythm

(d) Biological clock

(e) Seismonastic movement

(f) Photoperiodism

Q4: (a) Explain the role and deficiency symptoms of Nitrogen, phosphorus, potassium and calcium.

(b) Define Hydroponics and explain the types of hydroponic system.

OR

(c) Disadvantages of hydroponics.

(d) Hydroponic farming of tomato.

(e) Nutrient film technique.

(f) Hydroponic farming of cabbage.

Q5: (ANY 10)

(i) osmosis

(ii) Turgor pressure

(iii) Imbibition

(iv) photolysis.

(v) Photon.

(vi) Nitrate reductase.

(vii) ~~Nitrogenase~~ presentation time

(viii) Sun dial.

(ix) Hydroponics

(x) Hydroculture

(xi) NPK

(xii) LED

Dr. R.S. Meshram

Sem V

4/11/2023

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2.	Vaishnavi Sudhakar Walke	Walke.
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7.	Janvi S. Kakade	Kakade
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12)	Ashwini S. Rakshit	Rakshit
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14)	Janhvi R. Tatte	Janhvi.
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Dr. R. S. Meshram

नबीरा महाविद्यालय, काटोल

1 20/50

परीक्षा Unit Test

नांव Janhvi Rajesh Tatte

वर्ग B.S.C Sem 5 विषय Botany Paper-2 रोल नं.

	1	2	3	4	5	एकूण
गुण						
	6	7	8	9	10	
गुण						

तारीख : 04/11/2023

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

Q1(c) K^+ Malate hypothesis.

→ According to Levitt, the malic acid is produced in mesophyll cells of leaves. in guard cell.

→ The malic acid is weak acid, it dissociates into malate and H^+ ion.

→ The H^+ and pot The H^+ ion excret out of cell and potassium ion enter the guard cell from endodermis.

→ As the results, osmotic pressure of guard cells increases and stomata opens in during day.

→ In dark, the H^+ and potassium ion exchange takes places.

→ Then Again H^+ enter into the cell and potassium ion excret out of cell.

→ As the result the stomata is closed.

2

Q1(d) Diffusion.

→ The diffusion of solvent solid, liquid and gases from higher concentration to lower concentration is called Diffusion.

eg. O_2 in atmosphere, smell of agarbattis in room, blowing of baloon.

→ This is happen not by takes place in kinetic energy.

→ The energy exerted by diffusion is called diffusion pressure.

Suppose, a copper crystal is kept in a beaker containing water. The copper crystal after sometime it dissolves and diffuses in water slowly.

* Factors affecting Diffusion :-

1. Temprature

→ As the temprature increases the rate of diffusion increases.

2. Density medium.

→ The Diffusion pressure is inversely propotional to square root of Density medium.

$$\frac{r_1}{r_2} = \sqrt{\frac{d_2}{d_1}}$$

* Importance of Diffusion :-

→ The diffusion plays an important role in O_2 and CO_2 in atmosphere.

Q1e) Significance of Osmosis :-

1. Osmosis plays important role in dehiscence of fruit.
2. The movement of water from ~~move~~ non-living parts to living part xylem. 1.5
3. Plays role in absorption of water in roots..
4.

Q1f) Types of Transpiration :-

→ Transpiration

The loss of water in form of vapours from aerial parts of plants is called Transpiration. 2.5

→ It can be demonstrated by putting a potted plant in bell jar.

→ Water the soil in pot. and tie it with rubber sheet.

→ After some time the vapours or drops of water are seen at inner layer of bell jar.

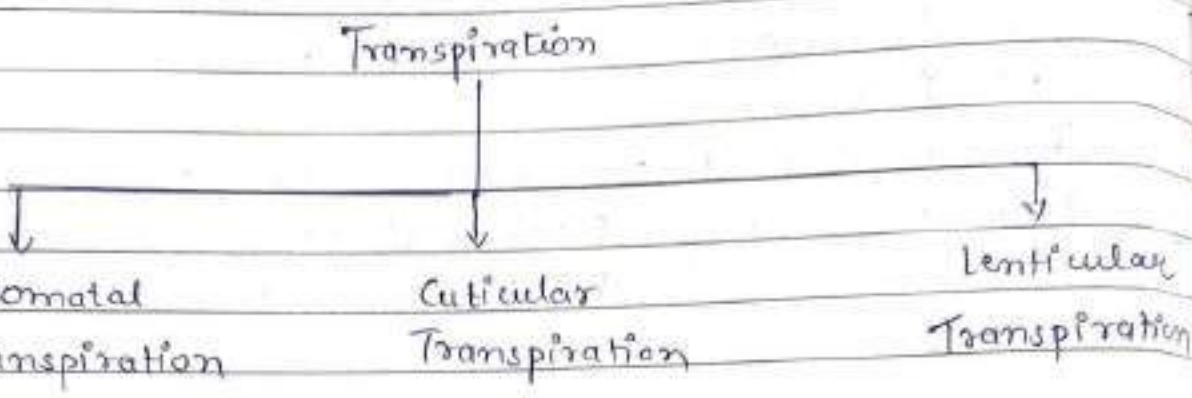


fig transpiration.

Q

There are three types of transpiration.

Q2



1. **Stomatal Transpiration :-**

→ The transpiration takes place in low stomata of leaves is called stomatal Transpiration.

→ The stomata present in abundance at lower part of leaves.

→ In monotot grasses stomatas are present in across leaves.

→ In aquatic plants, floating leaves the stomata are present at upper side in direction of sun.

2. **Cuticular Transpiration :-**

→ The transpiration takes place in cuticle is called is cuticular Transpiration.

3. **Lenticular Transpiration :-**

→ The transpiration takes plau in lenticles is called lenticular transpiration.

Q26) Non- cyclic phosphorylation.

→ In Non- cyclic phosphorylation both the systems are involved. i.e PS- I and PS- II

→ The cycle undergoes series of transfer of electron in zig- zag manner so called as non- cyclic or Z- scheme.

→ The photon of P680 of PS- II in form of chloro- a is excited and eject an electron.

→ The ejected electron is accepted by unknown compound Q. This unknown compound Q has 2- forms Q_A and Q_B.

→ From Q the electron is transferred to Ferrodoxin. cytochrome - b_6

→ From cytochrome b_6 ~~Ferrodoxin~~ the electron transfered to plastoquinone, then cytochrome - f.

→ From cytochrome - f electron is transferred to plastocyanin.

→ In this process, phosphorylation between cytochrome f and plastocyanin, 2 ATP molecules are formed.

Reaction in PS- I :-

→ The electron coming from PS- II is accepted by PS- I.

→ The electron from PS- I is transferred to ferrodoxin.

→ From Ferrodoxin is transferred to f reduce NADH.

→ The hole in PS- I is fulfilled by the electron coming from PS- II.

Q → The hole in PS-II is fulfilled by photolysis of water.

→ The non- cyclic electron transport, the electron from PSII is not cycled back to and transfer to PS-I. and from PS-I the electron is not cycle back and used in reduce NADH.

→ Therefore, the cycle is known as non-cyclic electron transport or non- cyclic phosphorylation.

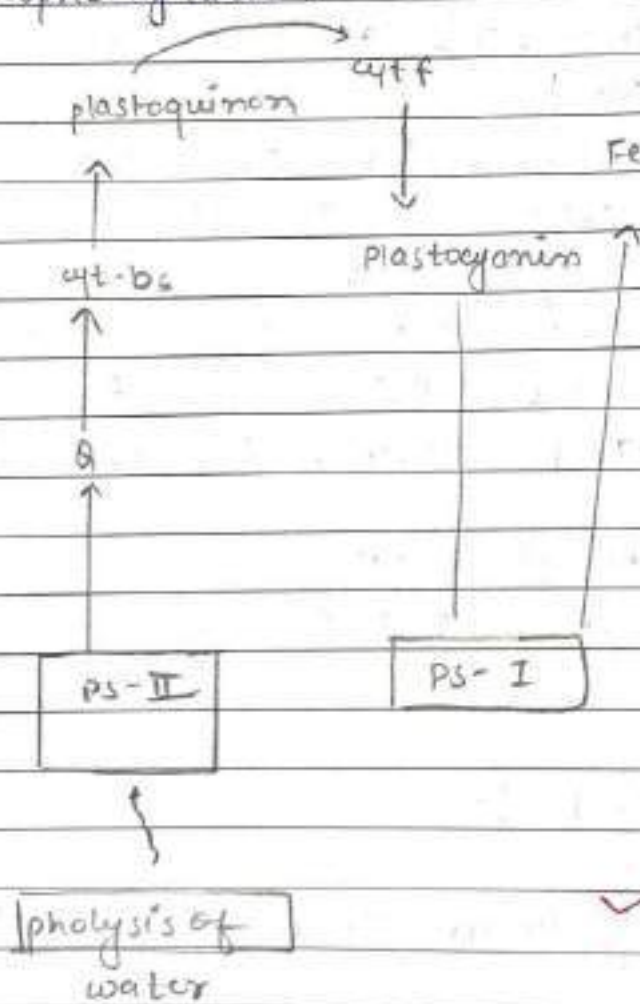


Fig. Non- cyclic phosphorylation

Q2C C_3 - cycle.

→ The C_3 - cycle is also known as Calvin cycle.

→ The calvin cyde is divided into 3 - distinct phases:-
1) Carboxylation phase.
2) Reduction phase.
3) Regeneration phase.

The calvin cyde :
There are various steps involved in calvin cycle :-

1. Carboxylation phase :-

→ The CO_2

Q2(c) C_3 - cycle :-

→ The C_3 cycle is divided into 3 distinct phases :-

1. Carboxylation Phase :-
→ In this phase CO_2 accepted by RUBP after hydrolysis converted into 3- phosphoglyceric acid.

2 1/2

2. Reduction Phase :-
→ The 3 - phosphoglyceric acid is converted into 3-phosphoglyceraldehyde.

3. Regenaration phase :-

→ The CO_2 acceptor RUBP is regenerated at end of the cycle.

Q There are various steps involved in calvin cycle :-

1. Carboxylation :-

→ The CO_2 acceptor (RUBP) & Ribulose 1,5 bisphosphate forms 6-carbon addition compound.

→ After hydrolysis it is converted into 3-phosphoglyceric acid.

→ The 3-phosphoglyceric acid is first stable product of this cycle.

RUBP + CO_2 ⟶ 3-phosphoglyceric acid (6 carbon addition compound) → 3-phospho glyceric acid.

2. Reduction :-

→ The ~~the~~ 3-phosphoglyceric acid is isomerised into 3-phosphoglyceraldehyde in presence of ~~trans~~ triose phosphate kinase ketose. This reaction takes place in 2 ways :-

3-phosphoglyceric acid —(kinase)→ 1,3 bisphosphoglyceric acid.

1,3, bisphosphoglyceric acid —(triose phosphate Kinase)→ 3-phosphoglyceric acid.

3. Regeneration of RUBP :-

→ Some 3-phosphoglyceraldehyde is converted into hexo acetone glycerie hydroxyacetone in presence of aldose forms Fructose 1,6 bisphosphate.

→ 3-glyceraldehyde —transketolase→ hydroxyacetone

aldolase

Fructose 1,6 bisphosphate

→ Fructose 1, 6 bisphosphate in presence of phosphtase converted into Fructose-6 phosphate.

Fructose 1,6 bisphosphate —Phosphtase→ Fructose-6 phosphate.

→ Fructose-6-phosphate react with 3-glyceraldehyde and form sucrose, starch etc.

→ 3-glyceraldehyde instead of forming starch, sucrose diverted to ~~for~~ regenerate Ribulose 1,6 bisphosphate.

→ 3-phosphoglyceraldehyde combine with Fructose-6 phosphate to form xylulosephosphate (5C) and Erythrose-6 phosphate (6C).

→ Erythrose-6-phosphate combine with hydroxyacetone phosphate to form ~~heptulophosphate~~ heptulose 1,7 bisphosphate.

→ heptulose 1,7 bisphosphate loss one phosphate group and form heptulose-6 phosphoste.

→ Heptulose-6 phosphate with 3-phospho glyceradehyde form Ribose-5 phosphate.

→ Ribose-5 phosphate finally convert into Ribulose 1, 6 bisphosphate.

→ In The calvin cycle, 3-phospho glyceric acid is first stable product it is also known as C_3-pathway

and reductive phosphate.

Q2(D) Red Drop Enhancement :-

→ Emerson while determining the quantum yield of photosynthesis of Chlorela of monochromatic light of different wavelength noticed that decrease in quantum yield more than P680 mμ.

→ That decrease in quantum yield is occured in red part of spectrum and so called as Red - drop effect.

→ The enhancement in photosynthesis is called Red- drop Enhancement.

Q3 What is movement in plant ? Explain tropism movement ?

→ The sudden exchange in external part of plant is called movement.

The movement of plant is divided into two types :-
1) Curvature movement.
2)

Tropic movement :-

→ The movement in unidirection flow of CSf stomata stigma called Tropic movement.

The tropic movement are divided into 2 parts :-

1) Phototropism :- The movement towards the direction of light is called Phototropism.

2) Geotropism :- The movement due to gravitational force is called geotropism.

→ The movement towards direction of soil is called positive geotropism.

→ The movement away from soil is called Negative geotropism.

QS

1. Osmosis :-

→ The diffusion of solvent from higher concentrate to lower concentration through semi perpeable membrane is called osmosis.

There are two types of osmosis :-

1) Endo osmosis

2) Exoosmosis.

2. Turgor pressure :-

→ The pressure excerted on wall is called Turgor pressure.

It is written as TP.

3. Imbibition.

→ The water absorbed by particle is called imbibant.

→ The water absorbed by dry hydrophilic colloids is called imbibition.

6) Nitrate Reductase :-

It is molybdenum found in soyabean leaves.

9) Hydrotropism :-

→ The movement of water in direction of water is called Hydrotropism.

M.Sc Sem I
2023-24
Unit test

GoodLuck | Page No.
Date 12 | 09 | 23

Sr No.	Name of student	Sign	mark
1.	Mayuri P. Digrase	Digrase	9½
2.	Khushali Mahoriya	Khushali	02
3.	mayuri D. Sembekar	Sembekar	05
4.	Mayuri W. Bonait	Bonait	1½
5.	Kalyani K. munne	K.K.munne	1½
6.	Harshlata G. Thakre	Thakre	4½
7.	kanak. A. Thakre	Thakre	05
8.	Sarika S. Chaudhari	Chaudhari	04
9.	Aishwarya S. Sawarekar	Sawarekar	9½
10.	Rani M. Wanjari		05
11.	Bhupesh R. Morekar		02

Q.1. Write in detail on geological time scale
— 10 M.

Q.2 Technique to study fossils preservation.
— 05 M.

ame- Aishwarya subhash sawarkar 12/09/23

class - M.Sc. (Botany - I) session- 2023 - 24

9½/15 15 marks

q.1 Write an detail on geological time scale (10 M)

⇒ Introduction :→

i) The history of the earth was approximate 350 million years old.

ii) The geologist have used two units for subdiving the geological history of the earth i.e. time and strata. 1½

iii) on the basis of the time there are 5 eras. these are as follows

a) Cenozoic
b) Mesozoic
c) paleozoic
d) proterozoic
e) Archaezoic

iv) ~~The~~ ~~per~~ .

iv) ~~The periods are~~ divide ~~into~~ epoch.

iv) The era are divide into period and period further divides into epoch.

v) on the basis of strata the geological time scale described as System, series, stage and zone.

vi) The climatic conditions, ages, vegetation are seen in below table.

	Era	period or system	Epoch or series	Dominant vegetation
1)	cenozoic	quaternary	pleistocene (17 million years ago)	Herbaceous plants
		tertiary	i) Pleiocene ii) miocene (30 million years ago) iii) oligocene (40 million years ago) iv) Eocene (60 million years ago) v) paleocene (80 million years ago	Angiosperm
2)	Mesozoic	i) cretaceous (140 million years ago) ii) Jurassic (170 million years ago) iii) triassic (200 million years ago)	i) Upper cretaceous ii) middle cretaceous iii) Lower cretaceous	Gymnosperm
3)	paleozoic	i) permian (240 million years ago) ii) carboniferous (280 million years ago) iii) Devonian (360 million years ago) iv) silurian (375 million years ago) v) Ordovician (420 million years ago) vi) cambrian (550 million years ago)		→ pteridophyte → primitive land plants → Algae mostly calcareous

4.	Proterozoic	Precambrian (1500 million years ago)		
5.	Archaeozoic	(3500 million years ago)		Unicellular organisms.

Table - Geologic time scale

★ Geological time scale described as :→

1. Proterozoic era (1500 million years ago)

i) Life is originated on this era.
ii) The fossils are found here in this era because the environment was not suitable for fossilization either the plants present that time are not fit for fossilization.
iii) The minimum amount of fossil are not sufficient for certain precambrian environments.

2. Paleozoic (550 - 240 million years old)

i) It has following 6 periods i.e.

a) permian - 240 (million years old)
b) carboniferous - 280 (million years old)
c) devonian - 360 (million years old)
d) silurian - 375 (million years old)
e) ordovician - 420 (million years old)
f) cambrian - 550 (million years old)

ii) the vegetation observed both aquatic and land plants. Aquatic plants like: pneumatothalli and protostartiles.

iii) It resembles to pthalophytes.

iv) the first land plants are seen in devonian and silurian period. (225 - 350 million years old)

v) The carboniferous and permian period include members like Lycopsida, psilopsida sphenopside and pteridopsida which forms dense forest.

vi) devonian and silurian period includes genera like zosterophyllum, cooksonia, Rhynia, Horneophyton and psilophyton.

vii) In late carboniferous period there is seasonal vegetation occurs.

viii) In this period seed ferns are abundant and this period also known as age of seed ferns.

ix) there is formation of annual ring in such species like callixylon eriianum and callixylon newberry.

x) there is formation of coal balls is called coalification. this is observed in members like Lycopsida, Sphenopsida, Gymnosperms and ferns.

Aishwarya S. Sawarkar

4) Mesozoic Era (200 - 110 million years ago)

i) It is also called age of cycads.
ii) There is dominant vegetation occurs as gymnosperms found in ~~ma~~ abundant amount.
iii) It includes 3 periods i.e.
a) Cretaceous
b) Jurassic
c) Triassic

iv) The members like Moraceae, Sparadeaceae, Lauriaceae are found in this era.

5) Cenzoic era (80 - 17 million years ago)

i) It is also called age of angiosperms.
ii) In this era formation of ranges like Himalaya in Asia and Alps in Europe.
iii) There is two periods i.e.
or
a) Quaternary
b) Tertiary

iv) Quaternary period has 1 epoch i.e. Pleistocene
v) Tertiary has 5 epoch like, pleiocene, miocene, oligocene, eocene and paleocene.
vi) There is herbaceous plants and angiosperms are dominant in this era.

Q2 Methods of preservation :→

Introduction

i) The fossils are preserved in lower amount of oxygen. Example = Anaerobic sediments (because decomposed) fungi, etc.

ii) The sediments which required oxygen for metabolism is gray, brown, green or black than red.

iii) Fossils are preserved by two methods i.e with or without alteration.

iv) Fossils which preserved with alteration includes processes like carbonification, petrification, recrystallization and replacement.

v) Fossils which preserved without alteration includes casting and moulding or indirect fossils like foot prints.

1) Carbonification

i) The organs of plants are preserved or soft organs preserved in this process.

ii) Gases includes in this process like hydrogen, nitrogen and carbon are of gases which process by impress compression.

iii) The remains part of plants are beneath crushed.

2) Petrification

i) It is the process of preservation as per mineralization.
ii) In this process calcium carbonate are filled spaces which present in organic matter.
iii) It is hard.

3. Recrystallization

i) It is the process which occurs in a shell of fossils of plants.
ii) In this process one form of calcium carbonate is replace by another form of calcium carbonate.

or

4. Replacement

i) It is also called as silification.
ii) In this process that atomic structure of plants are replace by silica.
iii) E.g. petrified forest.

5. casting and moulding :->

i) It is indirect method of preservation.
ii) ~~In~~ the indirect means the organic matter shows impression.

23-24

UNIT TEST

M.Sc Ist year (I sem)

Date 12/10/23
Page

	Name of students.	Date	Sign	Mark
(1)	Sarika Chaudhari	12/10/23	Chaudhari	
(2)	Mayuri Digrase	-1-	Digrase	
(3)	Amey R. Raut	-1-	Amey	
(4)	Kanak Thakre	-1-	Thakre	
(5)	Kalyani Munne	-1-	K.K.munne	
(6)	Khushali Mohoniya	-1-	Khushali	
(7)	Rani Wanjari	-1-	Rani	
(8)	Bhupesh Morekar	-1-	Bhupesh	
(9)	Aishwarya Sawarkar	-1-	Aswarkar	
(10)				

Q1. Write in detail on geological time scales - (6 M)

Any 3.

Q.2. Technique to study fossils preservation - 6 M

Q.3. Write note on Age determination - 6 M

Q.4. Write short note on Radiodating. - 6 M

Q.5. Write applied aspects of palaeobotany. - 6 M

Total - 40 M

नबीरा महाविद्यालय, काटोल

24/40

परीक्षा

नांव Aishwarya s. sawarkar

वर्ग M.Sc. I विषय Botany रोल नं.

	1	2	3	4	5	एकूण
गुण						
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तारीख : 16/10/2023

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकांची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

Q.1 Geological time scale :

⇒ Introduction

1) sequence of geological periods in the history of earth's is geological time scale.

2) Geological time scale is a system of chronological dating that relates stratigraphy (strata) to times.

3) Geological time scale used by geologist, palaeobotanist, palaeontologist and various other scientists which indicates the relationships and timing of events occurred during earth's history.

4) The history of the earth approximate 350 million years old.

5) The geologist have used two measure units for subdividing the history of earth i.e. time and strata.

6) On the basis of time geological time scale divided into 5 eras.

7) Similarly, on the basis of strata it divides into series, system, stage or zone.

8) Geological time scale put in a tabular form which gives the information about geological events

9) There are major divisions and subdivis are also present.

★ Major divisions and subdivisions of Geological time scale.

- The geological time scale divides into two groups called eon.

or

- Eon are then subdivided into eras.
- Each era further divided into period.
- The periods are subdivided into epoch.
- Then epoch further subdivided into age.

- Geological time scale :→ Redrawn from Taylor

Era	period	Epoch	Dominant vegetation
		Million years ago (M.Y.A.)	
Cenozoic	quaternary	pleistocene	Herbaceous plants
	Tertiary	Pliocene (17 million years ago)	Angiosperms
		Miocene (30 M.Y.A.)	
		oligocene (40 M.Y.A.)	
		Eocene (60 M.Y.A.)	
		Palaeocene (80 M.Y.A.)	
Mesozoic	Cretaceous (140 M.Y.A.)	i) Uppere Cretaceous	Gymnosperms
	Jurassic (170 M.Y.A)	ii) Middle Cretaceous	
	Triassic (200 M.Y.A.)	iii) Lower Cretaceous	
Paleozoic	permian (240 M.Y.A.)		
	carboniferous (280 M.Y.A.)	→	Pteridophytes
	Devonian (360 M.Y.A.)	→	Primitive Land Plants
	Silurian (375 M.Y.A)	→	Algae mostly
	ordovician (420 M.Y.A)		calcareous.
	cambrian (550 M.Y.A.)		

proterozoic	precambrian (1500 M.Y.A.)		
Archaezoic (3500 M.Y.A.)			unicellular organisms

Fig: Geological time scale (table)

- The eras of geological time scale are described as.

1) Precambrian era

i) The life originated on the earth this era.

ii) The rock of these era have less fossils because either the envi are not suitable for fossilization or the organisms present during that time not fit for fossiliza

iii) The amount of fossils are lack for study does not give exact inform about precambrian environment

2) Paleozoic era

i) It consists 6 periods. these are
- permian
- carboniferous
- devonian
- silurian
- ordovician
- cambrian

ii) It includes both aquatic and land plants.

iii) the aquatic plants like pneumatothallus and protofaxtiles shows resemblences to thalophytes.

iv) the first fossil land plants are observed during devonian and silurian period of this era.

v) the genera like Monograptus sporogonyte, zosterophylum, cooksonia, Rhynia, Hoeniophyton etc. are found in this era.

vi) the species like Lycopsida, sphenopsida, pteridopsida are present in this era.

vii) The seed and ferns are abundant hence these era known as age of seed and ferns.

viii) Annual ring form in this era.

3) Mesozoic era

i) It contain 3 periods
- Cretaceous
- Jurassic
- Triassic

ii) The ferns, cycads and conifers are abundant in this era.

iii) It is known as age of cycads.

iv) The origin of family like Lauraceae, Moraceae, etc.

4) Cenozoic era

i) It is known as age of angiosperms.

ii) The ranges like Himalaya in Asia and Alps in Europe are found in this era.

iii) The herbaceous plants are domimant in this era.

iv) It has two period i.e.
- Quaternary
- Tertiary.

Eons

1) phanerozoic
2) precambrian

Eras
periods
Epochs

4) cenozoic →

Eon → 1) phanerozoic
2) precambrian

Era → period → Epoch

cenozoic
mesozoic
paleozoic
proterozoic

quaternary → pleistocene
tertiary → miocene
oligocene
plicene
eocene
paleocene

cretaceous
Jurassic
triassic

paleozoic →
permian
ordovician
silurian
devonian
carboniferous
precambrian

Fig Divisions - sub-divisions of geological Time scale

Q.2

Techniques of fossil preservation

i) fossils are preserving in absence of oxygen.

ii) Example, anaerobic sediments (mostly decomposed), fungi, mostly decomposing bacteria and invertebrates.

iii) the fossils which require oxygen for metabolism are gray, green, black are brown in colour rather than red. 1½

iv) The fossils are preserved in two ways with and without alteration.

v) With alteration includes, carbonification petrification, recrystallization and replacement.

vi) Without alteration includes casting and moulding.

1) carbonification

- It is the process preserving plants and soft organisms.
- These includes, remains crushed the beneath of the rock and weight it. 01
- Gases involved like, Nitrogen, Hydrogen and oxygen.
- Compression & Heat process takes place.

वर्ग _____ विषय _____ रोल नं. _____

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तारीख : / /२०

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

2) petrification

- It refered to as per mineralization
- It involves the preserved matters like calcium carbonate and silica
- It is hard which fills the empty spaces in the materials and preserved the atoms

1½

3) Recrystallization

- It is the process observed in shell fossils.
- Where calcium carbonate of one type can convert or transfore into another type of calcium carbonate.
- It refereed as fossils.

4) Replacement

- It is the process where original structure of living can replaced by chemical structure.
- silification is common method.
- occurs in petrified forest.

5) casting and moulding

- It is indirect method.
- where impression takes place.

Q.2.

3 Age determination

- Age of fossils are determined by two methods.

i) Absolute method / Direct

ii) Relative method or indirect.

i) Absolute dating

- It includes following methods.
- It is the methods gives absolute age of fossils.

Dendrochronology

- the age of tree increases with the annual ring formation.

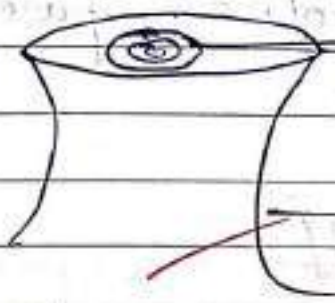


Fig. Annual ring formation.

Radiometric Dating

It involves the radioactive isotopes. Radioactive isotopes of Uranium is used.

$$^{238}U \longrightarrow {}^{206}Pb$$

Uranium — Lead

Uranium gets converted into Lead.

carbon dating

- It involves the isotopes of carbon atom i.e. ^{14}C and ^{12}C.
- the relationship of ^{12}C and ^{14}C are constant.
- the ^{14}C are living fossils.
- But, when they die this relationship changes.
- It is used for recent fossils.

q.2

4. Radio dating.

• Introduction

i) Radiodating involves two types of dating i.e.
• carbon dating
or Uranium dating.

ii) It is the type of dating which is commonly used for age determination of fossils.

iii) It involves radioactive isotopes of various elements like carbon, uranium, thorium and potassium.

iv) Radioactive isotopes are also called as biological clocks.

v) the original (parent) decay and leads to new formation of product (Daughter) in this dating.

vi) the methods of radio-dating are as follows and described as, one by one.

Radio-carbon Dating

i) In this method of dating used decay of radioactive isotopes.

ii) Isotopes are the atoms of elements whose the number of ~~nucle~~ neutron in their nuclei are different.

iii) the isotopes of carbon are used in this dating i.e. ^{14}C and ^{12}C.

iv) the ^{14}C are living fossils.

v) Relationships between ^{14}C and ^{12}C are constant.

vi) But, when they die this relationships are changed.

vii) this method used for recent fossils.

M.sc (sem I) 4/01/2024

Name of students	Date	sign.
1) Kanak. A. Thakre	4/01/24	Thakre
2) Harshlata G. Thakre	4/01/24	HThakre
3) Bhupesh B. Morekar	-/-	Morekar
4) Rutit A. Patil	-/-	Patil
5) Pragakta R. Nasare	-/-	Nasare
6) Sarika S. Chaudhari	-/-	Chaudhari
7) Mayuri P. Digrase	-/-	Digrase
8) Rani M. Wanjari	-/-	Wanjari
9) Aishwarya S. Sawarkar	-/-	Sawarkar

Q. Give a general account and Reproduction of Anthocerotales. — 12 M.

Q. Fossils bryophyte / History — 5 M

नबीरां महाविद्यालय, काटोल

12/18

परीक्षा

नांव Harshlata G. Thakre

वर्ग M.S.c - I (Botany) विषय Bryophyte रोल नं.

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तारीख 4 / 1 /2024

परीक्षकाची सही

टिप : १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे.
२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.
३) उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये. केल्यास दंडास पात्र होईल.

Q. Give a general account and Reproduction of Anthocerotales. — 12 M

→

Classification

Division : Bryophyte
Class : Anthocerotopsida
order : Anthocerotales
Family : Anthocerotaceae
Genus : Anthoceros
species : Himalayensis

02

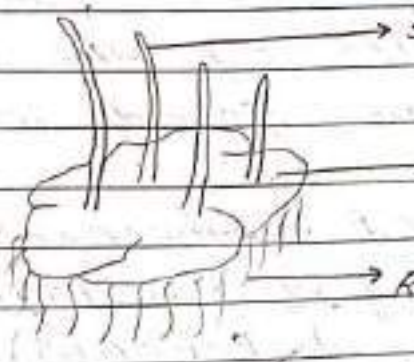


Fig : Thallus of Anthoceros

• Introduction :-

1) Representated 6 generas and 300 species.
2) widely distributed in temperat and tropical region.
3) In India, Anthoceros represente by about 25 species.
4) The three commen species of anthoceros is A. Himalayensis, A. erectus, A. Cambensis.
5) They are found in western Himalayas at an altitude of 5000 to 8000 ft.
6) They have been reported by Kashyap from mussorie, ~~Nainital and~~ Dalhousie ~~also~~. kulu & manali
7) Mehra and Handao are collected the first two species from Shimla, Nainital and Dalhousie also.

• Habit :-

1) All species are terrestial and cosmopolitan in distribution.
2) The species are grown in very moist and shady placeses, like slops rocks and sides of the bitches.
3) Some species are found in growing decaying wood.
4) The species of Anthoceros may be perennial (e.g A. Himalayensis) or annul (e.g. A. erectus).
5) Unlike other bryophytes anthocerous

is not well adapted to resists dry conditions.

- **External structure :-**

1) The plant body is dorsiventral, flat, thalloid, prostrate and dark green in colour.
2) Colonies are rosette like., Dichotomous branched.
3) The thallus is bilobed or pannital branching.
4) The dorsal surface of thallus is smooth & velvety because of the presence of several lobed lamella.
5) The ventral surface of thallus bears unicellular, smooth wall rhizoids.
6) Tuberculated and scales are present.
7) A small, rounded, thickened, dark bluish-green spots are seen on the ventral surface of thallus.
8) This thickened spots is called as Nostoc colonies.

- **Internal structure :-**

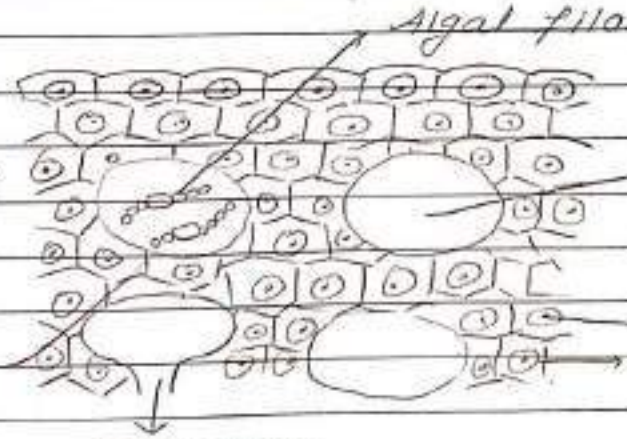


Fig : T.S. of thallus

1) No cellular differentiation of photosynthesis and storage region.
2) Thallus uniformally composed of thin walled is called as parenchyamatous cells.
3) The mucilage cavities are present on the lower surface of thallus.
4) Mucilage cavities open on ventral surface of thallus through the slime pores.
5) Mucilage cavity carry the blue green algae Nostoc.
6) Air chambers and pores are absent.

- Reproduction :-

(1) Vegetative Reproduction :-
By detich and decay older portion of thallus are fragmentation.
(2) By tuber, 3) By Gemmae, 4) By apical growth and
(5) apospory.

- **Sexual Reproduction :**

1) They reproduce by oogamous.
2) Anthocerous is both monoecious and diaecious.
3) Anthexidia mature before Archego-nia.
4) The male gametes bears structure is called Antheridium and the female gametes bears structure is called Archegonium.

- **Antheridium :-**

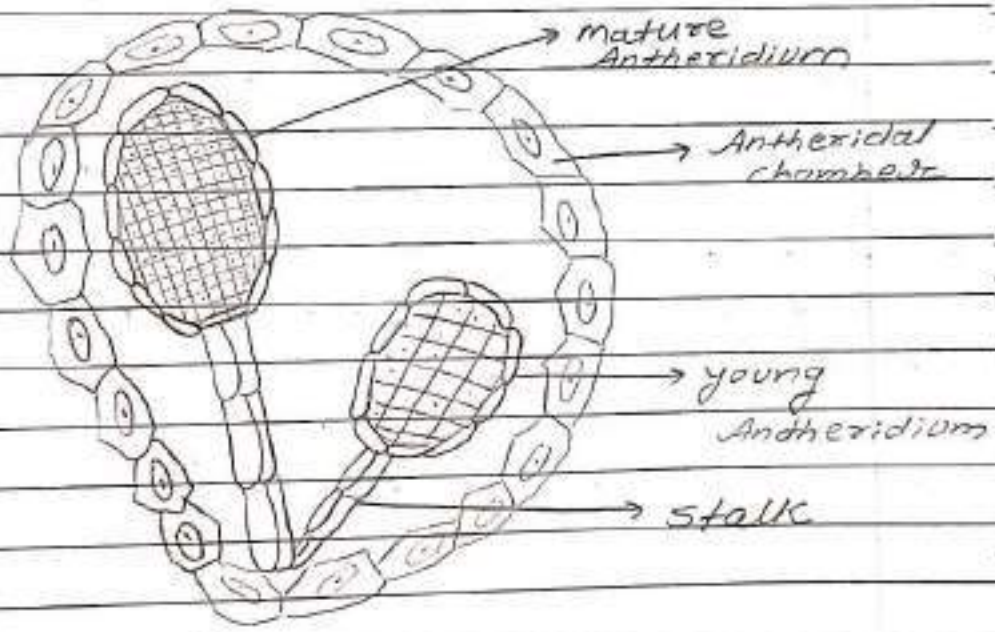


Fig :- structure of Antheridium

1) Antheridium form singly or in group in Antheridial chamber on the dorsal surface of thallus.
2) 1 - 25 Antheridia may be develop in each Antheridium.

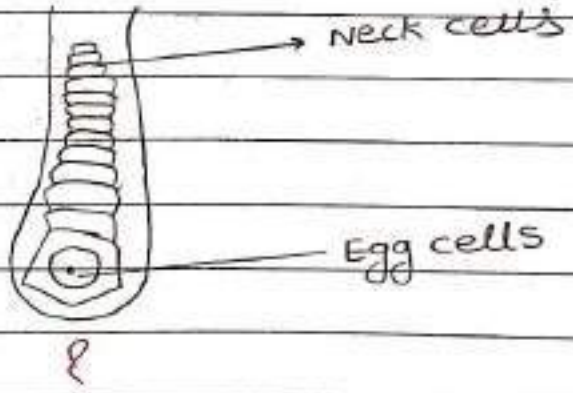
3) Antheridium is ovoid shaped and attached to stalk.

4) Antheridium attached to the base of the stalk.

5) In some species for e.g A. erectus 4 tiers of cells in sterial jacket.

6) Stalk is attached to the antheridial chamber to the lower surface of thallus.

- Archegonium :-



♀

~~UNIT~~ TEST.

Page No.
Date 18/09/24
Monday.

Q. Write Notes on-

1. Structure of carbohydrate and its function.

Sr No.	Name.	Sign.
1.	Harshlata G. Thakre	Thakre
2.	Arti R. Ramteke	Ramteke
3.	Mayuri W. Bansod	Bansod
4.	Bhupesh R. Morekar	Morekar
5.	Pedjakta R. Nasare	Nasare
6.	Sarika S. Chaudhari	Chaudhari
7.)	Mayuri P. Digrase	Digrase
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नबीरा महाविद्यालय, काटोल

Page No.
Date

05/08

परीक्षा

नांव Harshlata G Thakre.

वर्ग M.Sc I st Sem II विषय Botany रोल नं.

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तारीख : 18 / 3 /2024

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

२) उत्तर पत्रिकेच्या दोन्ही बाजूचा उपयोग करावा.

३) ~~उत्तर पत्रिकेत चित्र किंवा अयोग्य असा कोणताही प्रकार लिहू नये.~~
केल्यास दंडास पात्र होईल.

Que- write notes on :-

Q- Structure of carbohydrate and its function

→

1) Carbohydrates is a group of organic complex & food form in the form of starch, cellulose and sugar.

2) Carbohydrates are also called as Saccharides. that is Greek words which ~~is~~ means sugar, because almost all the carbohydrates have sweet ~~test~~. taste.

3) Many sugars have empirical formula $(CH_2O)_n$.

Carbohydrates

- Simple
  - Monosaccharides
    - Glucose
    - Fructose
    - Galactose
  - Disaccharides
    - Maltose
    - Lactose
    - Sucrose
- Complex
  - Polysaccharides
    - Fibres
    - glycogen

① Simple carbohydrates :-

1) Simple carbohydrates is a basic type of carbohydrate.

2) Soft drinks, cookies & other sweet snacks contain simple sugars.

3) Thus have one or two sugar molecules & are quickly digest living to rapidly rise in blood sugar level.

(2) Complex carbohydrates

(1) Complex carbohydrates are contain two or more sugar molecules often refers to as starchy food.

(2) Carbohydrate differaited into 3 groups.

Or

(1) Monosaccharides.
(2) Diasaccharides.
(3) polysaccharides.

(1) Monosaccharides :-

1) Monosaccharider are the simplest carbohydrates and cannot be hydrolyse into other smaller carbohydrates.

(2) The mono in monosaccharides mean in which show the the prescale of only one sugar units.

(3) They are the building block of disaccharides & polysaccharides for which reasions also known as Simple sugars.

(4) Ex- Glucose, fructose & glatose, etc.

(2) Disaccharides :-

(1) Disaccharides are made up of two monosaccharides.

(2) The most common ones includes sucrose, Lactose and maltose.

(3) The common disaccharides contain at least one glycosidic bond.

(4) Ex :- Maltose, Lactose and ~~sucrose~~ sucrose.

(3) polysaccharides :-

(1) polysaccharides are made up of two or more sugar unites.

(2) Ex., fibres, glycogen, etc

(3) polysaccharides is a group of sugar molecules that covalently attached with each other.

(4) polysaccharides id a large molecules composed of smaller units called monosaccharides.

M.Sc. II nd year (III rd sem)

Date - 17/08/2024

paper-2

Module-1 Angiosperms-I

Saturday.

Write short Notes on -

Q.1. plant Introduction and explain its root types. — 10 M

Q.2. Floral Morphology. — 10 M.

Sr No.	Name of students.	Sign.
1.	Bhupesh Morekar.	
2.	Mayuri Digraye.	
3.	Kanak. A. Thakre	
4.	Harshlata G. Thakre	
5.	Rani M. Wanjari	
6.	Aishwarya S. Sawarkar	
7.	Prajakta R. Nagare	

नबारा महाविद्यालय, काटोल

परीक्षा _____ Page No.: Date:

नांव Harshada Ganesh Thakre

वर्ग M.Sc 2nd year विषय Botany रोल नं. _____

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14/20

तारीख : 17 / 8 /2024

टिप:- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

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Que- write Notes on

Q 1] plant Introduction and explain root types.

Q-2] floral Morphology.

Date :

Q-1] → The plant structure are well differentiated into a well-define Root system, shoot system and leaves system.

2) The specialized structure is called as flowers are present.

3) Root system are Anchor of plant & absorb water and nutrient from the soil.

4) Stem system are support the plant body and transfer the water & nutrients.

5) Leaves system perform photosynthesis where light energy converted into chemical energy.

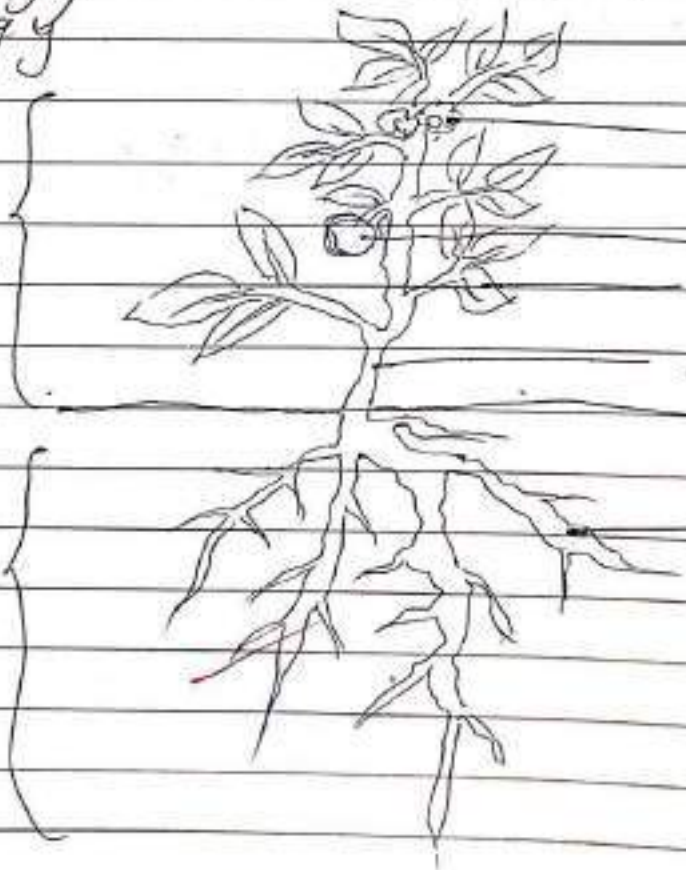


Fig :- structure of plant

Page No.:
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6) Angiosperm plant is also called as flowering plants.
7) It is the most diverse group of plant.
8) flower is a reproductive organs, they contain male (stamen) & female (pistil)
9) They attracted pollinators through nectors, scent and colour. 02
10) Leaves contain their photosynthetic pigment called chlorophyll & thin spores called stomata
11) In plants their are three types of root system are Tap root system, advantageous root system, and fibrous root system
12) ~~plant~~
• plant life forms :-

① Therophytes :- Annual plants complete their life cycle in a single seasons.
- They serves in unfavourable condition like a seeds. 01

② Geophytes :- perennial plants are underground organs like bulbs, tubers, etc.
- They help to serval in adverse conditions.

Page No.:
Date:

(3) Epiphytes :- plants grow on other plants for survive & supports.

(4) Helophytes :- They adaptes grow in saline condition such as mangroves.

(5) Stem & leaves Succulents :- The plant stored their water in stem & leaves & help to survive in arid environments.

(6) Xerophytes :- They adapted to grow in warm temperature features like leaf area compress, shoot short growing they help to survival in hot environment.

- Specila plant life forms are :-

(1) Saprophytes :- They grow on death organic matter.

(2) parasites :- they grow on other plants for their nutrients.

(3) Hemiparasites :- They grow on other plant for their nutrients & water if possible.

These are two type facultitives & obligate Hemiparasite.

Page No.:
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Root Types.

(1) The main organs in plant body is Root.

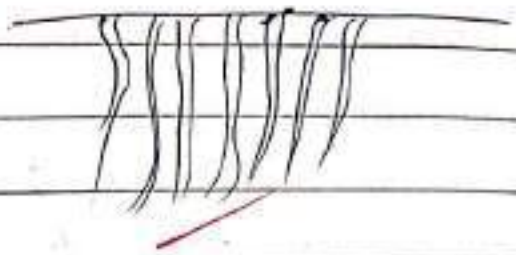
(2) Roots are three types they are Tap root system, fibrous root system & advantageous root system.

(1) Tap root system :- It is a ~~small~~ large and grow in downward.
- They mostly found in dicotledonous plants.
- provide nutrients & water for plant body.
- ex, ~~carrot~~ exi- onion, carrot

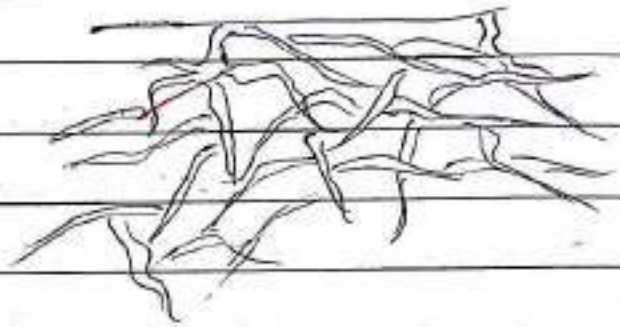
(2) Fibrous root system :- It is mostly found in monocotledonous plants.
- They look like carpet in the floor.
- closely associated with fungi.

(3) Advantageous root system :-
- It is mostly found in monocotledous plants.
- The grow in downward & contain water from the soil.

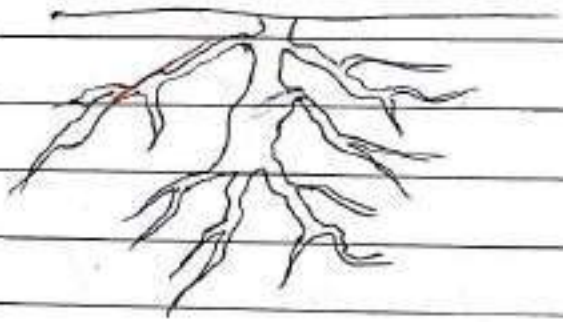
• Tap Root system



(2) Fibrous root system

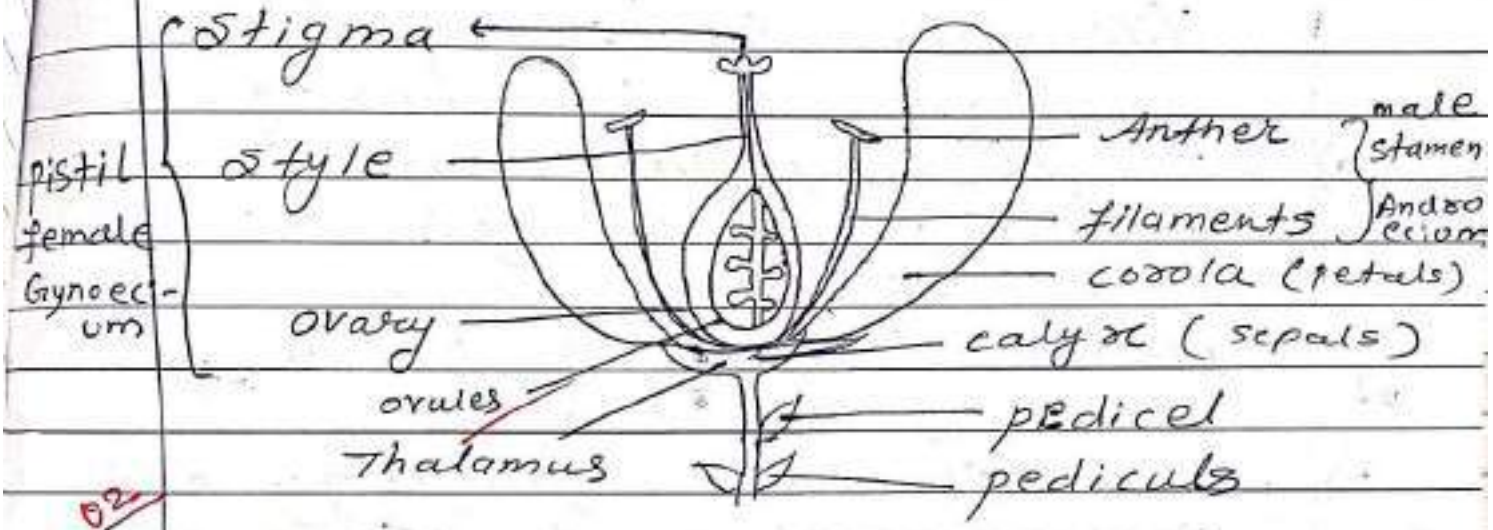


(3) Advantageous root system



Page No.
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-2) Floral Morphology :-



02

fig :- Floral Morphology

01

(1) flower is the attractive part in the plant body.
(2) They contain male & female reproductive organs.
(3) They attract pollinatours throu-gh nectar, scents and colours.
(4) Gynoecium is differentiated into stigma, style and ovary
(5) the stigma, style & ovary is also called as pistil.
(6) Androecium is differentiated into Anther & filaments.
(7) when Androecium & Gynoecium prents in same plant they perform self pollination.
(8) when the Androecium & Gynoecium present in differnt

plant they performed cross pollination.

9) In self pollination pollen grain transfer through filament in ovary & perform self pollination.

10) In cross pollination transfer pollen grain through birds, insects, etc on other plant flower & perform cross pollination.

02

11) some floral morphology are Actinomorphic & some are zygomorphic.

12) In Actinomorphic they divided in four parts.

13) In zygomorphic they divided only into two parts.

14) There are some types of petal which are monopetalous dipetalous, tripetalous, tetra petalous & polypetalous.

15) corolla are in various shapes & colours.

M.Sc semester III

Test

Wednesday.
18/09/2024

(1) Discuss the Pincam system of classification. — 8 M

(2) Give an account of Bentham and Hookers system of classification. — 8 M

(3) Write notes on Molecular Systematics and APG III system of classification — 8 M

SR No.	Name.	sign.
1)	Harshlata Thakre	HThakre
2)	Mayuri Digrase	Digrase
3)	Bhupesh Morekar	
4)	Aishwarya S. Sawarkar	Sawarkar

नबीरा महाविद्यालय, काटोल

परीक्षा Angiosperms

नांव Aishwarya S. Sawarkar Date: Taxonomy

वर्ग M.Sc. IInd विषय Botany रोल नं.

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18/24

तारीख : 18 / 09 / 2024

टिप :- १) उत्तर पत्रिकेच्या पहिल्या पानापासूनच सुरु करावे. परीक्षकाची सही

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Q.1) Discuss the Linnean system of classification — 8M

Q.2) Give an account of Bentham and Hookers system of classification — 8M

Q.3 Write notes on Molecular systematics and APG-III system of classification — 8M

Page No.:
Date:

Q.1

Introduction

⇒

1) Carl Linnaeus (1707-1778) or Carl Linne, was a Swedish botanist, zoolog and physician who formalized binomi nomenclature, the modern system of naming organisms.

2) He is known as the "father of mode taxonomy".

3) Many of his writings were in Latin, and his name is rendered in Latin a Carolus Linnaeus.

02

4) Linnaeus was born in the country sid of Smaland in southern Sweden.

5) He received most of his higher educatio at Uppsala university and began giving lectures in botany there in 1730.

6) In the 1740s, he was sent on several journeys, through sweden to find and classify plants and animals.

7) In the 1750s and 1760s, he continued t collect and classify animals, plants, and minerals, while publishing several volumes.

8) He ~~was~~ is also considered as one of the founders of modern ecology.

Page No.:
Date:

In botany and zoology, the abbreviation L. is used to indicate Linnaeus as the authority for a species name.

In older publication the abbreviation "Linn" is found.

Classification of Linnaeus :-

Linnaeus published species plantarum the work is now internationally accepted as the starting point of modern botanical nomenclature, in 1753.

02
The book contained 1,200 pages and was published in two volumes.

It described over 7,300 species.

Another important work of Linnaeus was, Genera plantarum published in 1737, delineating plant genera.

Around 10 editions were published, not all of them by Linnaeus himself; the most important is the 1754 fifth edition.

In it's Linnaeus divided the plant kingdom into 24 classes.

This was an artificial system of classification.

Plants classified on the basis of number cohesion, length & certain other characters of stamens.

Page No.:
Date :

19) The outline of the classes of his classif system of was published in Systema Naturae in 1735, and again in Genera plantarum in 1737.

20) outline of his classification as follows:

- class 1 → Monandria (flowers with 1 stamen)
- class-2 → Diandria (flowers with 2 stamens)
- class-3 → Triandria (flowers with 3 stamens)

and so on - - -

- Merits of classification :-

1) The only merit of this system is the quick and easy identification of plants based on one or a few characters.

- Demerits :-

1) The system is not at all sexual in proper sense.

2) The monocot dicot & gymnosperms plants are not considered separately.

3) Members of monocot & dicot become very close.

4) Examples → Hexandria (6 stamens in flower) & Alisma (Alismaceae of monocot) and Rumex (Polygonacea of Dicot) come very close.

Page No.:
Date:

.2

Bentham & Hooker's classification

Introduction

1) George Bentham (1800-1884) and Joseph Dalton Hooker (1817-1911) the two British botanists were associated with Royal Botanical Garden

2) They published a monumental work on Genera plantarum (1862-1883) in 3 volumes.

02

3) The first part of Genera Plantarum appeared in July 1862

4) The last part appeared in April 1883.

5) They have provided first hate descriptions of the families and genera of seed plants then known.

classification of Bentham & Hookers

1) Bentham and Hooker divided the seed Plants into Dicotyledons, Gymnosperms and monocotyledony.

2) They placed Ranales in the beginning and Poassey at the end.

Page No.:
Date:

3) Their treatment is inconsistent with present day understanding of the groups.

4) The gymnosperms are a distinct group from the angiosperms and their placement between monocot & dicot is inconsistent with our current understanding of this group.

5) The position of Apocarpae among monocotyledons is incorrect & they should have been placed in the monocot.

6) Bentham & Hooker divided seed plants into 3 classes.

- Dicotyledons
- ~~monocotyl~~ Gymnosperms
- monocotyledons

7) In this classification system there are, 3 sub-classes
21-series
25 cohorts and
202 orders (initially 200 orders)
orders - Vochysiaceae & cyrillae were incorporated later.

Page No.:
Date:

outline of classification

8) Class - 1 Dicotyledons →

- Two cotyledons present.
- Exogenous growth.

Example → Polypetalae (sub-class)
Thalamiflorae (series)
Ranales (cohort)
Ranunculaceae (order)

9) order class - 2 monocotyledons :-

- one cotyledon
- Endogenous growth.
- orders : 167 (Hydrocharideae)

Example ↑

10) Class - 3 Gymnospermae

- orders - 164 (Gnetales -)
  165 (Coniferae)
  166 (Cycadaceae).

★ Merits

- It is a natural system of classification.
- It includes geographical distribution of genera & species.
- The gymnosperms are placed as a separate had been done by Candolle
- The monocots placed after dicots which are accepted by present day
- taxonomists.
- The sequence adopted in the classification suggests an evolutionary pattern.

Demerits :-

1) classification does not includes origin of angiospeerms.

2) position of gymnospeerms between dicot & monocot is inappropriate.

3) Arrangement of monocot is unnatural and unphylogenetic.

3

APG - III system of classification :-

Introduction :-

1) To establish a consensus view of classification of flowering plants, an International group of flowering plant systematist christened as the Angiosperm Phylogeny Group (APG).

2) came together & propose a classification based on sound phylogenetic data sets in 1998.

02

3) Till 2010, three versions of classification have been proposed by this group. that was published in 1998, 2003 & 2009 each superseding the previous system.

4) Peter F. stevens, one of the authors of all three of the APG classification.

5) Maintains a web site, APweb, hosted by the Missouri Botanical Garden, which regularly update information since 2001.

6) Angiosperms classification and the APG until detailed genetic evidence became available.

7) The classification of flowering plants (Angiosperms) was based on their morphology (particularly that of the flower) and their biochemistry (what kinds of chemical compounds they contained or produced).

Date:

8) Classification systems were typically produced by an individual botanist or by a small group.

APG-III system of classification

⇒ To fill further gaps in APG-II and to develop a much more stabilized classification →

1) with recomendations of different scientific groups around the world, a revised and updated version of APG was published in October 2009 by a team of 8 scientists is the name of APG-III.

2) APG-III recognizes 413 families
Example → Sabiaceae, Boraginaceae

3) It contains 59 orders.
Example → Amborellales, Nymphaeales

4) out of 413 families of APG-III, 121 are monotypic.

5) 28 families represented by single species.

6) The largest family is Orchidaceae.

7) perusal of the literature has revealed that of 413 families, 259 represented in India.

Date :

Molecular systematics :-

1) Simpson (1961) suggests that systematics include identification, taxonomy classification and nomenclature and in accordance with a particular and well established plan.

2) In systematics there is scientific study of the kinds and diversity of organism and of any and all relationships between them.

3) de candolle (1813) first coined the term taxonomy.

4) Classification denotes arrangement of single plant or group.

5) The basic unit of classification are. family, order, class & division.

6) The usage of the terms taxonomy and systematics with regard to biological classification varies greatly.

7) Definition → American evolutionist Ernst mayer has stated that taxonomy is the theory and practice of classifying organisms.

8) "systematics" "is the science of the diversity of organisms".

Test

Tuesday
08/10/24

1. Give an account on taxonomic evidence in relation to embryology.

Q. Write briefly on taxonomic evidence in relation to cytology and phytochemistry.

	Name	Sign
1)	Kanak. A. Thakre	Athakre
2)	Harshlata. H. Thakre	HThakre
3)	Bhupesh R. Moreker	
4)	Mayuri P. Digrase	PDigrase.
5)	Rani M. Wamari	
6)	Aishwaeya Sawarekar	Asawarekar

Name :- Aishwaryq S. Sawardekar Date :- 08/10/24

Test – Taxonomic Evidence

8½/24

Q.1 Give an account on taxonomic evidence in relation to embryology

Q.2 Write briefly on taxonomic evidence in relation to cytology and phytochemistry.

Q.1

Ans. Introduction :-

- Taxonomy defined as the study of arrangement, identification and classification of plants.
- Taxonomy comes from word "taxus" means arrangement and "nomous" means study of rule. 01
- Taxonomy helps for identification of plants species.
- Taxonomy and systematics are interconnected with each other.
- Taxonomy deals with the study of comes for morphological characters of plants.
- It includes habit, root type, stem, leaves, floral morphology, fruit type, seed, etc.

Taxonomic evidence :->

1) Taxonomic evidences are referred to the identification and classification of group of naming organisms.

2) morphological characters gives only external structure of plants.

3) But, anatomical characters shows or describe internal structure of plants.

4) The word "morphology" comes from "morpha" — form and logous → study.

5) Taxonomic evidences are comes from debris of plant or from sedimentary rocks.

6) The individual of same groups share common morphological characters.

7) When morphological characters are unable to identify plants then anatomical characters must be used for identification of plants.

8) Morphology is basic tool for study of taxonomic evidences.

Embryology :-

1) Embryology is the branch of science which deals with the study of embryo.

2) Embryology includes the phases like gametogenesis, sporogenesis, embryogenesis etc.

Gametogenesis :-

3) The formation of gametes are called gametogenesis.

4) Sporogenesis :- formation of spores.

5) Embryogenesis :- formation and growth or development of embryo.

6) Embryology includes development of anther.

7) Embryology deal with the study of growth and development of embryo.

8) It also includes study of ovule.

9) There is formation of seed after development of embryo.

10) Embryology helps for study or identification of plants.



Fig. Female gametoph



Fig. Structure of Anther (male) gametophyte)

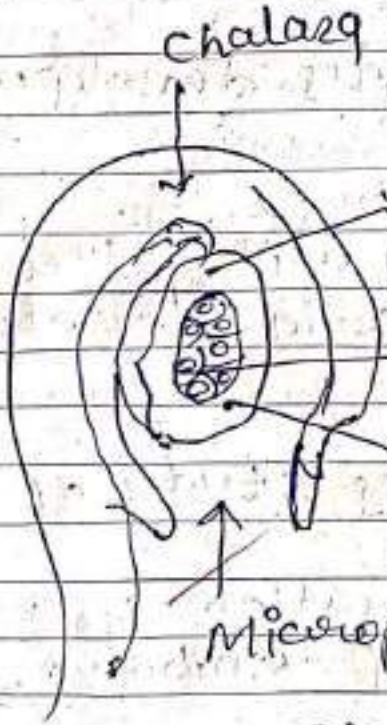


Fig. structure of ovule

Q.2

Page No.
Date:

Cytology

1) The branch of science deals with the study of cells of plants is called cytology

2) Cytology includes study of cells, tissues of plants.

3) Cytology deals with the study of cell wall, plasma membrane, structure of chromosome ½ etc.

4) Additionally, cytology includes study of chromosome number structure, size, shape, etc.

5) Cytology helps in the study of taxonomic evidences.

6) Cytology helps in the identification of plants.

7) In cytology there is study of chromosomes and their structure. helps for identification of plants species in taxonomy relation to.

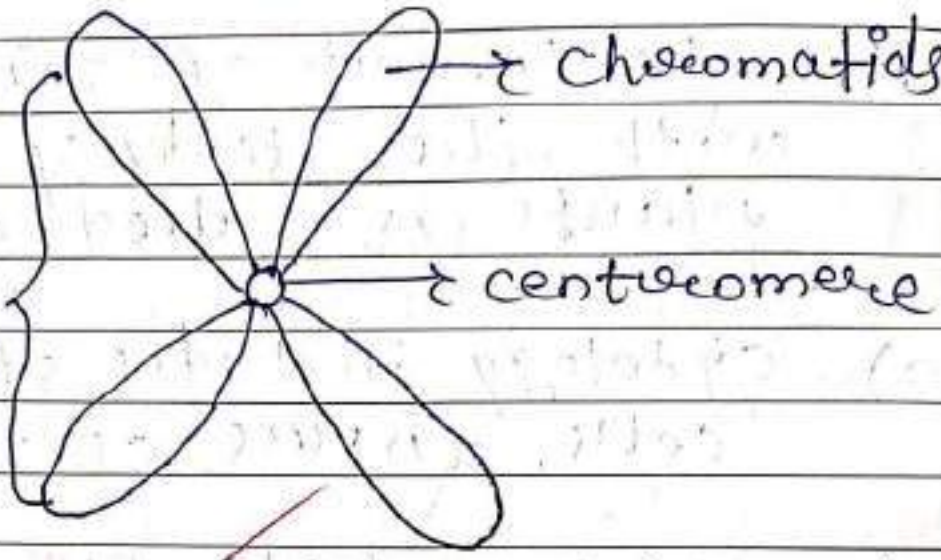


Fig. Structure of Chromosome

★ Chromosome (Structure)

1) Chromosome have rod like shape.
2) They consists of centromere, chromatids, chromatin fibres, etc.
3) on the basis of position of centromere chromosomes classified into following types.

- Telocentric
- Metacentric
- Acrocentric

a) Telocentric :→
centromere present on terminal site.

b) Metacentric :→
centromere present on middle portion.

c) Acrocentric →
centromere present on tip of the chromosome.

4) On the basis of number chromosomes classified into → two types :→

or

a) Haploid
b) Diploid

a) Haploid :→
They have single set of chromosomes.
- Denoted by 'n'.

b) Diploid :→
They have two set of chromosomes.
- Denoted by '2n'.
- Example → Human (2 sets of chromosom Have

Page No.
Date:

* phytochemistry

1) the branch of science which deals with the chemicals found in plants are called phytochemistry.

2) phytochemistry comes from "phyton" → plants and chemistry, study of chemical compounds.

3) there is several phytochemicals are found in plants. such as alkaloids, betalains, anthocyanins, glucosinolates, terpenoids, etc.

4) The pigments like Auxin, cytokinin, gibberellins, Ethylene, abscic acid also found in plants.

5) phytochemistry helps for identification of several plants.

6) phytochemistry is one of the basic tool for study of taxonomic evidences.

Test

15/10/2024

Q. What is bacterial transformation ? and its properties

Q. What are the Methods of transformation of bacteria ?

ST No.	Name	Sign
1)	Kanak. A. Thakre	
2)	Harshlata G. Thakre	
3)	Vikita. D. Damdhare	
4)	Bhupesh R. Morekar	
5)	Pragakta R. Nasare	
6)	Mayuri P. Digrase	
7)	Rani M. Wanjari	
8)	Aishwarya S. Jawarekar	

Ku. Harshlata G. Thakre

5½/24

1.Q] What is bacterial transformation and write down its properties.

2.Q] What are the Methods of Tranformation of Bacteria.

Q 1] → 1) Bacterial transformation, it is the process as uptake of foreign DNA by the cell.

2) It is the process by which the cell uptake and incoperated the foreign genetic material into it's genome.

3) Bacteria can take up foreign DNA in a process called as transformation.

D 4) transformation is a key step in DNA cloning.

5) It's occur after restriation digestion & ligation and transfer newly made plasmid to bacteria.

6) DNA cloning is a process of making many copies of a specific piece of DNA, such as gene.

7) (I) In cloning experiment, the researchers first insert a specific piece of DNA into a circulare plasmid.

8) ~~we~~ can use re (II) this method

can use restriation enzyme
and ligase is called as
ligation.

9) After ligation the next st
is tranfer of DNA into th
bacteria

10) This process is called as
transformation.

11) we can uses the antibioti
& DNA analysis to identi
the Bacteria that contai
the plasmid.

12) This are the four step
bacterial transformation

13) ~~selecti~~ cloning, ligation,
restriction & than transf
mation.

14) After this step we can
uses as antibiotic to
identification of DNA
contain plasmid.

15) It is the process used in
genetic engineering for
making genomically mod
organisms (GMOs).

01

2] → Methods of Transformation of Bacteria:

1) Bacteria can take up foreign DNA in a process called as Bacterial transformation.
2) It's occurs after restriction & ligation transfer DNA into bacteria.
3) There are some methods are used for Bacterial transformation.
4) Such methods are calcium chloride method, In using virons method & electroporation method.

- Calcium chloride method 3-

1) This method is commonly used for foreign DNA.
2) It is the process commonly used to introduce the foreign DNA to bacteria.
3) This process is called as the bacterial transformation.
4) It allow to DNA interact with cacl2 to make bacterial cell wall more permeable.
5) There are few step of calcium chloride method.
6) step I in formation of compenent cell.

7) Step II :- Incubation /
Step III :- Adding DNA /
Step IV :- Heat shock /
Step V :- Recovering / and
Step VI :- selection /

8) Step-I :- Formation of competent cell :-
Bacterial cell treated to calcium ~~ion~~ chloride solution to make bacterial cell wall more permeable to DNA.

9) Step-II :- Incubation :- After treated with CaCl2 solution on then Incubated on ice about 30 min

02/

10) Step-III :- Adding DNA :-
After incubation on ice then added plasmid DNA & gently mixed.

11) Step-IV :- Heat shock :-
After Adding DNA & mix well gently then Heat higher temp 90° C, then placed back quickly on ice.
- Heat Shock ~~me~~ process creat thermal imbalance to make DNA transfer into bacterial cell easily.

12) Step V :- Recovering :- recover to
After Heat-shock it's Cay able to transfer in nutrient rich-medium.

13) Step VI :- Selection :- After Recoving we selected the transfer in agar media & store for next used.

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UNIT TEST ATTENDENCE

Class:-B.Sc. I (Sem. I) Subject:-ELECTRONICS Paper-I-Unit-I

Date: 26/08/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	Bharat	19
2	Krutika R. Junghare	K.R. Junghare	00
3	Madhavi V. Bhongale	AB	
4	Gunjan M. Shembekar	Gshembekar	03
5	Tina R. Mahoriya	Rmahoriya	01
6	Harshada A. Bodad	Hbodad	01
7	Prachi G. Deshmuklh	AB	
8	Roshni D. Uikey	AB	
9	Kalyani A. Renghe	K.A.Renghe	03
10	Poonam I. Dupare	AB	
11	Nilesh S. Gadre	Gadre	00
12	Vaishavi H. Sahare	AB	
13	Pragati Rewatkar	Rewatkar	03
14	Hujef Sheikh	hujefa	02
15	Kalyani R. Kadwe	Rkadwe	01
16	Nandini R. Bhongale	AB	
17	Bhawana R. Werulkar	AB	

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Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS Paper-I-Unit-II**

Date: 10/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	AB	
2	Krutika R. Junghare	AB	
3	Madhavi V. Bhongale	MBhongale.	04
4	Gunjan M. Shembekar	AB	
5	Harshada A. Bodad	AB	
6	Prachi G. Deshmuklh	AB	
7	Roshni D. Uikey	AB	
8	Kalyani A. Renghe	AB	
9	Poonam I. Dupare	AB	
10	Nilesh S. Gadre	AB	
11	Vaishavi H. Sahare	AB	
12	Pragati Rewatkar	AB	
13	Hujef Sheikh	AB	
14	Kalyani R. Kadwe	KRKadwe	09
15	Nandini R. Bhongale	AB	
16	Bhawana R. Werulkar	AB	

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Class:-B.Sc. I (Sem. I) Subject:-ELECTRONICS Paper-I-Unit-III

Date: 15/12/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya		16
2	Krutika R. Junghare	AB	
3	Madhavi V. Bhongale	AB	
4	Gunjan M. Shembekar	AB	
5	Harshada A. Bodad	AB	
6	Prachi G. Deshmuklh	AB	
7	Roshni D. Uikey	AB	
8	Kalyani A. Renghe	AB	
9	Poonam I. Dupare	AB	
10	Nilesh S. Gadre	AB	
11	Vaishavi H. Sahare	AB	
12	Pragati Rewatkar	AB	
13	Hujef Sheikh	AB	
14	Kalyani R. Kadwe	AB	
15	Nandini R. Bhongale	AB	
16	Bhawana R. Werulkar	AB	

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Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS Paper-2-Unit-1**

Date: 21/09/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	AB	—
2	Krutika R. Junghare	K.R. Junghare	09
3	Madhavi V. Bhongale	AB	—
4	Gunjan M. Shembekar	Gshembekar	04
5	Tina R. Mahoriya	AB	—
6	Harshada A. Bodad	AB	—
7	Prachi G. Deshmuklh	AB	—
8	Roshni D. Uikey	AB	—
9	Kalyani A. Renghe	AB	—
10	Poonam I. Dupare	AB	—
11	Nilesh S. Gadre	AB	—
12	Vaishavi H. Sahare	Sahare	06
13	Pragati Rewatkar	Rewatkar	10
14	Hujef Sheikh	hujefsheikh	10
15	Kalyani R. Kadwe	Kkadwe	12
16	Nandini R. Bhongale	AB	—
17	Bhawana R. Werulkar	Bhwerulkar.	05

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Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS Paper-II-Unit-I**

Date: 18/12/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	AB	
2	Krutika R. Junghare	AB	
3	Madhavi V. Bhongale	AB	
4	Gunjan M. Shembekar	AB	
5	Harshada A. Bodad	AB	
6	Prachi G. Deshmukh	AB	
7	Roshni D. Uikey	AB	
8	Kalyani A. Renghe	K.A.Renghe	11
9	Poonam I. Dupare	AB	
10	Nilesh S. Gadre	AB	
11	Vaishavi H. Sahare	AB	
12	Pragati Rewatkar	Rewatkar	13
13	Hujef Sheikh	AB	
14	Kalyani R. Kadwe	KRKadwe	12
15	Nandini R. Bhongale	AB	
16	Bhawana R. Werulkar	AB	

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Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS Paper-II-Unit-II**

Date: 21/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	Bharat	15
2	Krutika R. Junghare	AB	—
3	Madhavi V. Bhongale	AB	—
4	Gunjan M. Shembekar	AB	—
5	Harshada A. Bodad	AB	—
6	Prachi G. Deshmuklh	AB	—
7	Roshni D. Uikey	AB	—
8	Kalyani A. Renghe	AB	—
9	Poonam I. Dupare	AB	—
10	Nilesh S. Gadre	AB	—
11	Vaishavi H. Sahare	AB	—
12	Pragati Rewatkar	Rewatkar	13
13	Hujef Sheikh	hujefa	10
14	Kalyani R. Kadwe	KRKadwe	14
15	Nandini R. Bhongale	AB	—
16	Bhawana R. Werulkar	AB	—

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Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS Paper-II-Unit-IV**

Date: 28/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya		16
2	Krutika R. Junghare	AB	
3	Madhavi V. Bhongale	AB	
4	Gunjan M. Shembekar		09
5	Harshada A. Bodad	AB	
6	Prachi G. Deshmuklh	AB	
7	Roshni D. Uikey	AB	
8	Kalyani A. Renghe	AB	
9	Poonam I. Dupare	AB	
10	Nilesh S. Gadre	AB	
11	Vaishavi H. Sahare	AB	
12	Pragati Rewatkar	AB	
13	Hujef Sheikh		08
14	Kalyani R. Kadwe	AB	
15	Nandini R. Bhongale	AB	
16	Bhawana R. Werulkar		08

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Class:-B.Sc. I (Sem. II) Subject:-**ELECTRONICS Paper-I-Unit-I**

Date: 18/12/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	Rushiya	13
2	Krutika R. Junghare	AB	
3	Gunjan M. Shembekar	Gshembekar	12
4	Harshada A. Bodad	AB	
5	Prachi G. Deshmukh	AB	
6	Roshni D. Uikey	AB	
7	Kalyani A. Renghe	K.A Renghe	14
8	Vaishavi H. Sahare	Sahare	09
9	Pragati Rewatkar	Rewatkar	12
10	Hujef Sheikh	hujefa	09
11	Kalyani R. Kadwe	Rkadwe	14
12	Bhawana R. Werulkar	Bhawang.	10
13		AB	

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Class:-**B.Sc. I (Sem. II)** Subject:-**ELECTRONICS Paper-I-Unit-II**

Date: 12/03/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya		14
2	Krutika R. Junghare	AB	
3	Gunjan M. Shembekar		08
4	Harshada A. Bodad	AB	
5	Prachi G. Deshmukh	AB	
6	Roshni D. Uikey	AB	
7	Kalyani A. Renghe	AB	
8	Vaishavi H. Sahare	AB	
9	Pragati Rewatkar		12
10	Hujef Sheikh		11
11	Kalyani R. Kadwe	AB	
12	Bhawana R. Werulkar		10
13			

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Class:-**B.Sc. I (Sem. II)** Subject:-**ELECTRONICS Paper-I-Unit-III**

Date: 02/04/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	AB	
2	Krutika R. Junghare	AB	
3	Gunjan M. Shembekar		09
4	Harshada A. Bodad	AB	
5	Prachi G. Deshmukh	AB	
6	Roshni D. Uikey		08
7	Kalyani A. Renghe	AB	
8	Vaishavi H. Sahare		09
9	Pragati Rewatkar		13
10	Hujef Sheikh	AB	
11	Kalyani R. Kadwe	AB	
12	Bhawana R. Werulkar		09
13			

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NABIRA MAHAVIDYALAYA, KATOL

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
Session 2023-2024
UNIT TEST ATTENDENCE

Class:-**B.Sc. I (Sem. II)** Subject:-**ELECTRONICS Paper-II-Unit-I**

Date: 28/03/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	Bharat	16
2	Krutika R. Junghare	AB	
3	Gunjan M. Shembekar	AB	
4	Harshada A. Bodad	AB	
5	Prachi G. Deshmukh	AB	
6	Roshni D. Uikey	AB	
7	Kalyani A. Renghe	K.A.Renghe	12
8	Vaishavi H. Sahare	AB	
9	Pragati Rewatkar	Rewatkar	13
10	Hujef Sheikh	Hujef	06
11	Kalyani R. Kadwe	KRkadwe	15
12	Bhawana R. Werulkar	Bhawana.	10
13			

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
Session 2023-2024
UNIT TEST ATTENDENCE

Class:-**B.Sc. I (Sem. II)** Subject:-**ELECTRONICS Paper-II-Unit-II**

Date: 22/04/2024

22/04/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Bharat R. Rushiya	AB	
2	Krutika R. Junghare	AB	
3	Gunjan M. Shembekar	Gshembekar	11
4	Harshada A. Bodad	AB	
5	Prachi G. Deshmukh	AB	
6	Roshni D. Uikey	AB	
7	Kalyani A. Renghe	K.A.Renghe	14
8	Vaishavi H. Sahare	Sahare	10
9	Pragati Rewatkar	AB	
10	Hujef Sheikh	AB	
11	Kalyani R. Kadwe	K.R.Kadwe	15
12	Bhawana R. Werulkar	Bhawana.	09
13			

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-B.Sc. II (Sem. III) Subject:-ELECTRONICS Paper-I-Unit-1

Date: 16/09/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Anjali N. Gaikwad	AB	
2	Kunal G. Gawande		13
3	Kushal R. Nasare	K.R.nasar	18
4	Lakesh G. Sawarkar		18
5	Nayan S. Yelekar	N Yelekar	07
6	Sarvesh M. Gajbhiye	AB	
7	Dhanshri G. Kalambe	D.G.nalambe	09
8	Divya R. Kumbhare	Divya	08
9	Nikita N. Chauhan		05
10	Toshika K. Deshmukh	Deshmukh	11
11	Chintu Y. Hajare		13
12	Laxmikant S. Khandait	L.S.Khandait	04
13	Samyek R. Panchbhai	AB	
14	Sharukh U. Pathan		10
15	Tushar D. Waghmare	AB	
16	Yash R. Junghare		17

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. II (Sem. III)** Subject:-**ELECTRONICS Paper-II-Unit-1**

Date: 09/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Anjali N. Gaikwad	Anjali	06
2	Kunal G. Gawande		11
3	Kushal R. Nasare	K. Rnasare	17
4	Lukesh G. Sawarkar	Lgsawarkar	18
5	Nayan S. Yelekar	Nyelekar	05
6	Sarvesh M. Gajbhiye	AB	—
7	Dhanshri G. Kalambe	DGrkalambe	04
8	Divya R. Kumbhare	AB	—
9	Nikita N. Chauhan	AB	—
10	Toshika K. Deshmukh	Deshmukh	13
11	Chintu Y. Hajare	AB	—
12	Laxmikant S. Khandait	AB	—
13	Samyek R. Panchbhai	Dsampac	02
14	Sharukh U. Pathan	AB	—
15	Tushar D. Waghmare	Dwaghmare	10
16	Yash R. Junghare	Dyashre	13

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DEPARTMENT OF ELECTRONICS
NABIRA MAHAVIDYALAYA, KATOL

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. II (Sem. III)** Subject:-**ELECTRONICS Paper-II-Unit-I**

Date: 04/03/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Anjali N. Gaikwad	AB	—
2	Kunal G. Gawande		12
3	Kushal R. Nasare	K.R.nasare	18
4	Lukesh G. Sawarkar		17
5	Nayan S. Yelekar	AB	—
6	Sarvesh M. Gajbhiye		10
7	Dhanshri G. Kalambe	AB	—
8	Divya R. Kumbhare	divya	06
9	Nikita N. Chauhan	Chauhan	04
10	Toshika K. Deshmukh	AB	—
11	Chintu Y. Hajare	AB	—
12	Laxmikant S. Khandait	AB	—
13	Sharukh U. Pathan	AB	—
14	Yash R. Junghare		10

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NABIRA MAHAVIDYALAYA, KATOL

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-B.Sc. II (Sem. III) Subject:-ELECTRONICS Paper-II-Unit-II

Date: 21/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Anjali N. Gaikwad	AB	—
2	Kunal G. Gawande	AB	—
3	Kushal R. Nasare	K.R.nasare	16
4	Lukesh G. Sawarkar	AB	—
5	Nayan S. Yelekar	Yelekar	05
6	Sarvesh M. Gajbhiye	AB	—
7	Dhanshri G. Kalambe	AB	—
8	Divya R. Kumbhare	AB	—
9	Nikita N. Chauhan	AB	—
10	Toshika K. Deshmukh	AB	—
11	Chintu Y. Hajare		17
12	Laxmikant S. Khandait	AB	—
13	Samyek R. Panchbhai	AB	—
14	Sharukh U. Pathan		09
15	Tushar D. Waghmare	AB	—
16	Yash R. Junghare		12

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. II (Sem. III)** Subject:-**ELECTRONICS Paper-II Unit-III**

Date: 28/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	Anjali N. Gaikwad	AB	—
2	Kunal G. Gawande		12
3	Kushal R. Nasare	AB	—
4	Lukesh G. Sawarkar		17
5	Nayan S. Yelekar	Yelekar	04
6	Sarvesh M. Gajbhiye	AB	—
7	Dhanshri G. Kalambe	D.G. Kalambe	06
8	Divya R. Kumbhare	divya	08
9	Nikita N. Chauhan	Chauhan	04
10	Toshika K. Deshmukh		14
11	Chintu Y. Hajare		15
12	Laxmikant S. Khandait	L.S. Khandait	04
13	Samyek R. Panchbhai	AB	—
14	Sharukh U. Pathan		10
15	Tushar D. Waghmare	Waghmare	11
16	Yash R. Junghare		14

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. III (Sem. V)** Subject:-**ELECTRONICS Paper-1-Unit-I**

Date: 09/10/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE	AB	
2	GEETKUMAR ASHOKRAO BHASME	GABh	07
3	NAYAN KAILASRAO SAMBHARE	AB	
4	NEHA SUDHAKAR KAKDE	@Skakde	07
5	PARANAY PRAMOD MALVI		06
6	PRAGATI GUNVANTA MUNNE	Pmunne	05
7	ROHIT RAJU JAISWAL	AB	

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-B.Sc. III (Sem. V) Subject:-ELECTRONICS Paper-2-Unit-I

Date: 18/08/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE	A.A.Bhange	12
2	GEETKUMAR ASHOKRAO BHASME	GABhasme	08
3	MONIKA WAMAN TAJANE	AB	—
4	NAYAN KAILASRAO SAMBHARE	AB	—
5	NEHA SUDHAKAR KAKDE	NSKakde	10
6	PARANAY PRAMOD MALVI	P.P.Malvi	07
7	PRAGATI GUNVANTA MUNNE	AB	—
8	PRAVINA PANDURANG LOKHANDE	Pravina	06
9	ROHIT RAJU JAISWAL	AB	—
10	SANKALP DILIP BAVISKAR	AB	—

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. III (Sem. V)** Subject:-**ELECTRONICS Paper-2-Unit-II**

Date: 16/09/2023

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE		09
2	GEETKUMAR ASHOKRAO BHASME		06
3	NAYAN KAILASRAO SAMBHARE		04
4	NEHA SUDHAKAR KAKDE	AB	—
5	PARANAY PRAMOD MALVI	P.P.Malvi	05
6	PRAGATI GUNVANTA MUNNE	AB	—
7	ROHIT RAJU JAISWAL	AB	—

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DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. III (Sem. VI)** Subject:-**ELECTRONICS Paper-1-Unit-I**

Date: 24/02/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE	AB	—
2	GEETKUMAR ASHOKRAO BHASME	GABh	08
3	NAYAN KAILASRAO SAMBHARE	AB	—
4	NEHA SUDHAKAR KAKDE	NSkakde	05
5	PARANAY PRAMOD MALVI	P.P.Malvi	05
6	PRAGATI GUNVANTA MUNNE	AB	—

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DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. III (Sem. VI)** Subject:-**ELECTRONICS Paper-2-Unit-I**

Date: 13/02/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE	ABhange	08
2	GEETKUMAR ASHOKRAO BHASME	AB	
3	NAYAN KAILASRAO SAMBHARE	AB	
4	NEHA SUDHAKAR KAKDE	NSkakde	10
5	PARANAY PRAMOD MALVI	Pmalvi	09
6	PRAGATI GUNVANTA MUNNE	Pmunne	09

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
UNIT TEST ATTENDENCE

Class:-**B.Sc. III (Sem. VI)** Subject:-**ELECTRONICS Paper-2-Unit-II**

Date: 28/03/2024

Sr. No.	Name of Student	Signature	Total Marks (20)
1	ANKUSH ASHOK BHANGE	AB	
2	GEETKUMAR ASHOKRAO BHASME	GBhasme	07
3	NAYAN KAILASRAO SAMBHARE	AB	
4	NEHA SUDHAKAR KAKDE	Nskakde	08
5	PARANAY PRAMOD MALVI	Pmalvi	07
6	PRAGATI GUNVANTA MUNNE	Pgmunne	07

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NABIRA MAHAVIDYALAYA, KATOL

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Nabira Mahavidyalaya, Katol
DEPARTMENT OF ELECTRONICS
Session: 2023-2024

Class:-**B.Sc. I (Sem. I)** Subject:-**ELECTRONICS** Date: 23/10/2023

S.N.	Name of Student	Assignment Submission	Record submission	
1	Bharat R. Rushiya	✓	✓	
2	Krutika R. Junghare	✓ L	✓ L	
3	Madhavi V. Bhongale			
4	Gunjan M. Shembekar	✓	✓ L	
5	Harshada A. Bodad			
6	Prachi G. Deshmukh			
7	Roshni D. Uikey	✓	✓ Incomplete	
8	Kalyani A. Renghe	✓	✓	
9	Poonam I. Dupare			
10	Nilesh S. Gadre			
11	Vaishavi H. Sahare	✓	✓ L	
12	Pragati Rewatkar	✓	✓	
13	Hujef Sheikh	✓	✓	
14	Kalyani R. Kadwe	✓	✓	
15	Nandini R. Bhongale			
16	Bhawana R. Werulkar	✓	✓ L	

Class:-**B.Sc. II (Sem. III)** Subject:-**ELECTRONICS** Date:

S.N.	Name of Student	Assignment Submission	Record submission	
1	Anjali N. Gaikwad	✓	✓	
2	Kunal G. Gawande	✓	✓	
3	Kushal R. Nasare	✓	✓	
4	Lukesh G. Sawarkar	✓	✓	
5	Nayan S. Yelekar	✓	✓	
6	Sarvesh M. Gajbhiye	✓	✓	
7	Dhanshri G. Kalambe	✓	✓	
8	Divya R. Kumbhare	✓	✓	
9	Nikita N. Chauhan	✓	✓	
10	Toshika K. Deshmukh	✓	✓	
11	Chintu Y. Hajare	✓	✓	
12	Laxmikant S. Khandait	✓	✓	
13	Samyek R. Panchbhai	✓	✓	
14	Sharukh U. Pathan	✓	✓	
15	Tushar D. Waghmare		✓	
16	Yash R. Junghare	✓		

Class:-**B.Sc. III (Sem. V)** Subject:-**ELECTRONICS**

S.N.	Name of Student	Assignment Submission	Record submission	
1	Ankush A. Bhange	✓	✓	
2	Geetkumar A. Bhasme	✓	✓	
3	Nayan K. Sambhare			
4	Neha S. Kakade	✓	✓	
5	Pranay P. Malavi		✓	
6	Pragati G. Munne	✓	✓	
7	Rohit R. Jaiswal			

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DEPARTMENT OF ELECTRONICS
NABIRA MAHAVIDYALAYA, KATOL

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Date: 18th Oct. 23

Shrikrupa

Page:

Seminar "Presentation on Eminent Scientist"

Department of Electronics organized Seminar "presentation on Eminent Scientist" on dated 18th Oct. 2023 at 10.30 AM. The following students were present in this presentation.

Sr.	Name of Student	Semester	Sign
1)	Joshika Deshmukh	III	Deshmukh
2)	Geetkumar A. Bhasme	V	
3)	Ankush A. Bhange	V	
4)	Pragati D. Rewatkar	I	
5)	ROSHANI UIKEY	I	
6)	Vaishnavi Sahare	I	
7)	Bhavana R. Wenalkar	I	
8)	Gunjan Mohembekar	I	
9)	Bharat R. Rushiya	I	
10)	Kalyani A. Renghe	I	
11)	Kalyani R. Kadwe	I	
12)	Lykesh G. Sawarkar	III	
13)	KUSHAL R. NASARE	III	

Date 18/10/23

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NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
TIME TABLE
SESSION SECOND (2023-24)

		I	II		III	IV
		8.10 TO 09.00 AM	09,.00 TO 09.50 AM		10.05 TO 10.55 AM	10.55 TO 11.50 AM
MON	II SEM	FBM	EM		ENG	CMA
	IV SEM	HRM	MM		FM	IV&BE
	VI SEM	FM II				
TUE	II SEM	SOCI	CMA		ENG	FBM
	IV SEM	FW	HRM		IV&BE	MM
	VI SEM	FM I				
WED	II SEM	EM	CMA		ENG	SOCI
	IV SEM	FW	HRM		FM	MM
	VI SEM	FM I				
THU	II SEM	FBM	SOCI	RECESS (15 MINUTES)	ENG	CMA
	IV SEM	HRM	FW		FM	IV&BE
	VI SEM	FM II				
FRI	II SEM	FBM	EM		SOCI	CMA
	IV SEM	HRM	MM		FM	FW
	VI SEM	FM II				
SAT	II SEM	ENG	FBM		EM	SOCI
	IV SEM	IV&BE	MM		FM	FW
	VI SEM	FM I				

HOD/Co-ordinator
BBA Department
N.M.V. Katol

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
TIME TABLE (2023-24)

		I	II		III	IV	V
		8.10 AM TO 08.58 AM	08.58 AM TO 09.46 AM		09.56 AM TO 10.44 AM	10.44 AM TO 11.32 AM	11.32 AM TO 12.20 NOON
MON	I SEM	EOB	F A/C		AD	-	FME
	III SEM	PFM	EBCG		EM	BST	MF
	V SEM	ED	MF		RM	IBM	-
TUE	I SEM	EOB	F A/C		AD	FME	ENG
	III SEM	PFM	EBCG		EM	MF	-
	V SEM	ED	POM		-	IBM	RM
WED	I SEM	ENG	EOB		AD	FME	F A/C
	III SEM	PFM	EBCG		BST	-	MF
	V SEM	POM	RM		ED	MF	IBM
THU	I SEM	MF	EOB		F A/C	AD	ENG
	III SEM	PFM	EBCG		BST	EM	-
	V SEM	POM	RM		MF	ED	-
FRI	I SEM	ENG	FME		AD	F A/C	-
	III SEM	-	EM		BST	MF	EBCG
	V SEM	POM	IBM		RM	ED	MF
SAT	I SEM	ENG	FME		F A/C	EOB	MF
	III SEM	MF	EM		BST	PFM	-
	V SEM	POM	IBM		MF	-	ED

RECESS (10 MINUTES)

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya, Katol

BBA Department

Session-2023-24

FIRST TERM EXAMINATION

TIMING 9.30 AM TO 12.30 PM

DATE	DAY	SEMESTER	SUBJECT
31/10/23	TUESDAY	I	ENGLISH
01/11/23	WEDNESDAY	I	EOB
02/11/23	THURSDAY	I	FME
03/11/23	FRIDAY	I	FA/C TALLY
04/11/23	SATURDAY	I	AD

NOTE : ITS COMPULSORY TO ATTEND EXAM.

: UNIFORM AND COLLEGE ID CARD IS COMPULSORY

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya, Katol

BBA Department

Session-2023-24

FIRST TERM EXAMINATION

TIMING 9.30 AM TO 12.30 PM

DATE	DAY	SEMESTER	SUBJECT
31/10/23	TUESDAY	I	ENGLISH
01/11/23	WEDNESDAY	I	EOB
02/11/23	THURSDAY	I	FME
03/11/23	FRIDAY	I	FA/C TALLY
04/11/23	SATURDAY	I	AD
31/10/23	TUESDAY	III	FME
01/11/23	WEDNESDAY	III	AE
02/11/23	THURSDAY	III	OB
03/11/23	FRIDAY	III	CW
04/11/23	SATURDAY	III	AD
31/10/23	TUESDAY	V	ED
01/11/23	WEDNESDAY	V	POM
02/11/23	THURSDAY	V	RM
03/11/23	FRIDAY	V	IBE

NOTE : ITS COMPULSORY TO ATTEND EXAM.

: UNIFORM AND COLLEGE ID CARD IS COMPULSORY.

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya, Katol

BBA Department

Session-2023-24

SECOND TERM EXAMINATION

TIMING 9.30 AM TO 12.30 PM

DATE	DAY	SEMESTER	SUBJECT
10/04/24	WEDNESDAY	SECOND SEM	ENG
12/04/24	FRIDAY	SECOND SEM	FBM
13/04/24	SATURDAY	SECOND SEM	C&M A
15/04/24	MONDAY	SECOND SEM	ES
16/04/24	TUESDAY	SECOND SEM	SOCIOLOGY
10/04/24	WEDNESDAY	FOURTH SEM	FMM
12/04/24	FRIDAY	FOURTH SEM	HRM
13/04/24	SATURDAY	FOURTH SEM	FFM
15/04/24	MONDAY	FOURTH SEM	FW
16/04/24	TUESDAY	FOURTH SEM	IV &BE
10/04/24	WEDNESDAY	SIXTH SEM	FM/MM
12/04/24	FRIDAY	SIXTH SEM	FM/MM

NOTE : ITS COMPULSORY TO ATTEND EXAM.

: UNIFORM AND COLLEGE ID CARD IS COMPULSORY.

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BBA Department
N.M.V. Katol

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24

ASSIGNMENT / TEST (SUBJECT - EOB.)

18/9/23

Sr. No.	Name of Student	Assignment	Unit I	Ass. II	Test II	III		IV	
1	Abhijit Surendra Warokar		05		06				
2	Abhishek Ashok Shirudiya		07		08				
3	Aditya Nandkishor Ghuse	A.N. Ghuse	08	A.N. Ghuse	07	—			
4	Akanksha Sanjayrao Nasare		08		07	—			
5	Akshay Jaypal Chandel		07		06				
6	Akshay Rajendra Futane		05		05				
7	Alfiya Jamil Bodhar		07						
8	Amruta Vinayak Kawadkar		08		07				
9	Aniket Bablu Thosar	—		—		—			
10	Anuj Purushottam Thakare	—			05				
11	Anuj Surendra Sarode	—			04				
12	Anushka Arun Umathe		06		07				
13	Anushka Kishor Bidkar		06		08				
14	Aryan Hemraj Khambalkar		05		06				
15	Ayush Purushottam Kale		05		05				
16	Bhakti Dashrath Nanotkar		06		07	—			
17	Bhavana Sunil Mahajan	B.S. Mahajan	05	B.S. Mahajan	04	B.S. Mahajan			
18	Bhumi Yunesh Daware	—		—		—			
19	Bhumika Rajaram Bondre		05		07				
20	Bhumika Rajendra Kale	Bhumika R Kale	06	Bhumika R Kale	07	Kale R Bhumika		Kale Bhumika R	
21	Bhushan Rajesh Nehare		06		06				
22	Bushra Hamid Sheikh		05		03				
23	Chetna Mohan Wanjari								
24	Devansh Sureshrao Hirudkar		03		03				

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	Dhanashri Sudhakar Nadekar	Dnadekar	04	Dnadekar	05	Dnadekar		Dnadekar	
26	Dharashri Shashikant Somkuwar	Dhanshri	05	Dhanshri	07	Dhanshri		Dhanshri	
27	Disha Manoj Khedkar	Khedkar	06	Khedkar	05	Khedkar			
28	Divya Rajesh Nasre	Dnasre	06	Dnasre	01	Dnasre			
29	Diya Hiwaraj Koche	Dkoche	05	Dkoche	07	Dkoche		Dkoche	
30	Dolly Ravindra Malode	Dmalode	07	Dmalode	06	Dmalode		Dmalode	
31	Gaurav Gopal Paliwal	Gpaliwal	06	Gpaliwal	05	Gpaliwal			
32	Gaurav Sudarshan Chowdhari	Gchowdhari	05	GSchowdhari	03	G.chowdhari			
33	Gauri Sanjay Ghate	Gauri	04	Gauri	05	Gauri			
34	Gauri Suresh Pathade	G.Pathade	05	GPathade	06	GPathade		GPathade	
35	Girish Manohar Nasre	—	05	—	06	—			
36	Gunjan Gopal Gurav	G.G.Gurav	07	G.G.Gurav	05	G.G.Gurav			
37	Gunjan Raju Katlam	Gkatlam	05	Gkatlam	05	Gkatlam			
38	Harsh Babaraoji Kale	—		—		—			
39	Harsh Ravindra Nagmote	—		—		—			
40	Himanshu Yadaorao Naik	HNaik	06		05	—			
41	Ishanvi Sanjay Yeole	—	05	—	05	—			
42	Ishika Motilal Kumariye	Ikumariye	05	Ikumariye	07	Ikumariye			
43	Janhvi Raju Walke	Jwalke	04	Jwalke	06	Jwalke		Jwalke	
44	Janvi Satishji Dubey	Jdubey	05	Jdubey	06	—		Jdubey	
45	Jay Gajanantrao Dabhekar	—		Jdabhekar	06	—			
46	Jay Narendra Daware	Jday	05	Jday	03	Jday			
47	Jitesh Rameshrao Chanpe	—		Chanpe	05	—			
48	Kajal Anil Barai	—				—			
49	Kalyani Anandrao Potdar	K.Potdar	05	K.Potdar	05	K.Potdar		K.Potdar	
50	Kalyani Manohar Dhole	Kdhole	05	Kdhole	04	Kdhole		Kdhole	
51	Karan Divakar Gaidhiye	Dankar	03	Dankar	07	Dankar			
52	Karan Rajesh Jaiswal	—		Kjaiswal	04	—			
53	Kartik Avinash Kene	Kartik Kene	03	Kartik Kene	04	Kartik Kene		Kartik Kene	
54	Kartik Chandan Rathod	Kathod	03	Kathod	04	Kathod			
55	Kartik Prakash Sarode	Ksarode	05	Ksarode	05	Ksarode			
56	Kaushik Rajesh Berad	Kaushik	06	Kaushik	07	Kaushik			
57	Khushi Ramesh Chaudhari	Khadhari	07	Khadhari	05	Khadhari		Khadhari	

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	Kiran Charanji Wasnik		05		07				
59	Komal Akash Masane		05		06				
60	Lokesh Rajendra Charde	—				—			
61	Maheshwari Nilkanth Nehare		05		06				
62	Maithali Vilas Bhujade		03		05				
63	Manaswi Shriram Satfale		05		06				
64	Manish Babarao Bhoyar		05		03				
65	Neha Sudhakar Dawre		07						
66	Nikhil Sanjayrao Chopade		05						
67	Nisha Rajendra Kapse		05						
68	Pawankumar Marotrao Dhole		05						
69	Payal Sunil Murodiya		03						
70	Piyush Ramesh Wanjari	—		—		—			
71	Pornima Dadarao Kavadkar		03						
72	Praful Pravin Thengne	—				—			
73	Prajwal Ashok Mankar								
74	Pranoti Ashok Choudhari								
75	Pratham Padmakar Ukey	—				—			
76	Pratiksha Sheshrao Bangar		05		07				
77	Prem Manoj Nasare		05		03				
78	Rachana Rajendra Gawande		07		05				
79	Ritesh Padmakar Guldhe	—			06				
80	Ritisha Muniraj Dhamde		07		05				
81	Rohan Rameshwar Dhawad	—			06	—			
82	Roshani Dilip Mohkar	—	03		05				
83	Ruchita Rajesh Somkuwar		05		04	—			
84	Rupesh Subhashrao Madankar		03		03	—			
85	Sahil Rajendra Badode		03		04				
86	Sahil Ravichandra Waghdhare		06		05				

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	Saloni Janardhan Harane			—	—	—			
88	Salonis Dipak Gaikwad				07				
89	Samiksha Sanjay Gir		04		06				
90	Samiksha Shakulal Suryavanshi	S.S. Suryavanshi	05	S.S. Suryavanshi	03	Samiksha			
91	Sanket Ramchandra Gakhare	—			04	—			
92	Sanket Shamrao Taywade		05		03	—			
93	Sanskruti Shrinivas Mandaogad		06		05				
94	Shabri Sanjay Khapre				06				
95	Shruti Laxmanrao Katare		03		06				
96	Shrutika Diwakar Dhore				06				
97	Siddhi Dnyaneshwar Bhonde		06		07				
98	Sneha Ravindra Zoting				06	—			
99	Snehal Kisna Manekar		07		04				
100	Suhani Sanjayrao Ladke				04				
101	Sushant Deepak Amparwar		03		02	—			
102	Swati Ranjendra Moroliye				04	—			
103	Tanvi Marotrao Amle				04				
104	Tina Ravindra Ingale		03		05				
105	Triveni Dhanraj Thombare				03				
106	Ujawal Ashok Gadhawe	—			05				
107	Ujwala Yuvraj Charde		05		04				
108	Vaibhav Ramaji Ghatode		06		05				
109	Vaishnavi Arvind Hingawe	—				—			
110	Vaishnavi Vishnuji Patankar		06		05				
111	Vanshri Sheshrao Charde		03		05				
112	Vedant Manohar Helonde	—			04				
113	Veedhi Vilas Zade				04				
114	Vidhi Surendrarao Raut		06		06				
115	Vrushabh Bhimraoji	—			05	—			

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N.I.S.E. Hatod

	Nilatkar								
116	Yash Ashokrao Dalvi	—		Y.A.Dalvi	06	—			
117	Yash Jaiprakash Raut	Yraut	05	Yraut	04	Yraut		Yraut	
118	Yash Prakash Ghormade	—		Y	05	—			
119	Yashasvi Rameshrao Thakare	Thakre	06	Thakre	05	Thakre			
120	Yogishri Sanjay Ulkey	Yulkey	07	Y.Ulkey	05	Yulkey			

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Nabira Mahavidyalaya Katol

BBA Department

Assignment Record Session 2023 - 2024

SEM IV Subject- HRM SEM IV Prof. J.M. Patil

SR. NO.	Name of Students	Asgn1	Asggn2	Asgn3	Asgn4	Test 1	Test 2	Test 3	Test 4
1	AAKANSHA NARENDRA METANGALE	—	Aakan	Aakan	Aakan	04	07		
2	ABHISHEK GAJANAN CHAUDHARI	—							
3	ADITYA RAJU KUMERIYA	—							
4	ANIS MURTUJA SHEIKH	—							
5	ANSHUL NANESHWAR ANWANE	Anshul	Anshul	Anshul	Anshul	03	06		
6	ARNAV SANDEEP KHADKOTKAR	—							
7	ARPITA JIWANDAS MAHANT	Arp	Arpita	Arpita	Arpita	05	06		
8	ARPITA RAMGOPAL SONONE	—	A.R.Sonone	A.R.Sonone	A.R.Sonone	05	06		
9	ASHIKA PUNAJI TUMDAM	—	A.P.Tumdam	A.P.Tumdam	A.P.Tumdam	04	07		
10	ATIF AYYAZ JIWANI	Atif	Atif	Atif	Atif	04	08		
11	AVANTIKA SUBHASH BHAKTE	Avantika	Abhakte	Abhakte	Abhakte	03	05		
12	AVINASH SURESH MURODIYA	—							
13	CHANDRADIP RAMDAS EDKE	—	CREdke	CREdke	CREdke	02	05		
14	CHETAN PRALHAD KHANDARE	—							
15	CHETAN SITARAM KATHANE	C.S.Kathane	C.S.Kathane	C.S.Kathane	C.S.Kathane	02	07		
16	CHIRAG MANOJ PANDE	—							
17	DEVYANI KHEMRAJ GATHE	—	Gathe	Gathe	Gathe	04	05		
18	DEVYANI BALWANTRAO WALKE	—	D.B.Walke	D.B.Walke	D.B.Walke	04	06		
19	DISHA SANJAY WANKHADE	D.Wankhade	D.Wankhade	D.Wankhade	D.Wankhade	06	07		
20	DIVYA SANJAY BALPANDE	D.S.Balpande	D.S.Balpande	D.S.Balpande	D.S.Balpande	04	06		
21	DURGESH GULAB BOBDE	Dur	Dur	Dur	Dur	03	05		
22	GAURAV BABAN NAGALE	GNagale	GNagale	GNagale	GNagale	05	07		
23	GAURAV RAJESH WAGHMARE	—							
24	GAURI JAGDISH UKEY	—							
25	HARSHAL SANJAY POTE	Harshal	Harshal	Harshal	Harshal	06	06		
26	HIMANSHU BHASKAR SAWADH	—							
27	HINGLAJ SHANKAR BHANGE	—							
28	ISHA TANAJI KUTHE	I.T.Kuthe	I.T.Kuthe	I.T.Kuthe	I.T.Kuthe	05	07		
29	ISHANK GOPAL KHUTATE	—	Ishank	Ishank	Ishank	04	03		
30	JANAVHI GAJANAN KADU	Jkadu	Jkadu	Jkadu	Jkadu	06	05		
31	JAYESH SUNIL DHANDE	—							
32	KARAN MUKESH ARORA	—	Karan	Karan	Karan	02	07		
33	KHUSHI SANJAY PATHE	Kpathe	Kpathe	Kpathe	Kpathe	06	07		

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34	KIRAN PRAKASH KUMRE	—							
35	KRISHNA PRAVIN KADU	—							
36	KRUNAL DILIPRAO KALE	—							
37	KSHITIJ SUNIL BHANDWALKAR	—							
38	KULDIP DATTUJI BHADE	—	K. Bhade	K. Bhade	K. Bhade	02	05		
39	KUNAL KISHOR PADOLIYA					03	07		
40	LALIT SANJAY NAVGHARE	—							
41	LINA DILIP BHASME								
42	LUKESH GANESH REWATKAR	—							
43	MARIA SHARFUDDIN SYED	—	Maria	Maria		00	04		
44	MEGHA RAJENDRA GIRADKAR					05	05		
45	MISS. NEHA NARAYANRAO HAJARE					03	05		
46	MOHIT NAMDEV GHAGRE	—				03	06		
47	NAJUKA PRAMOD GHORMADE					05	06		
48	~~NASIBA ASGAR SHEIKH~~	—							
49	OMKAR DINKAR PATIL	—							
50	PIYUSH KISHOR JADHAV	—							
51	PIYUSH KESHAO JAULKAR	—							
52	PRAGATI DILIP GAWALI					04	05		
53	PRANALI SHANKAR RAUT					03	06		
54	PRANAY RUKHMANAND BHISEKAR	—				05	06		
	PRANAY FISKE	—							
55	PRATIK GANPAT YAMDE					03	07		
56	PRATIK ARJUNRAO CHARPE	—							
57	PRAVEEN ASHOK WANJARI	—							
58	PREETI MOHAN DONGRE	—							
59	PUJA ARUN CHEDGE					04	05		
60	RAHUL ONKAR MATE	—							
61	RAJKUMAR MAROTRAO DHURVE	—							
62	RAKESH DASHRATH KALAMBHE					04	07		
63	RITESH VINAYAK THAKRE					02	03		
64	RITESH CHHATRAPATI DHOPRE	—							
65	RITIK RAMBHAU REWATKAR					05	07		
66	ROHITKUMAR MADANLAL PRAJAPATI	—				04	06		
67	ROSHAN NAMDEO DEWASE	—				02	02		
68	RUCHIKA SUNIL THAWLE					05	05		
69	RUTUJA HARESHWARJI BASEWAR					06	07		
70	RUTVIK JAYRAM HINGVE	—							
71	SAGAR SHANKARRAO GAIKWAD	—							

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72	SAHIL SANJAY MESHRAM					02	05		
73	SAKSHI DNYANESHWAR MANGAL	–				02	05		
74	SAKSHI BANDU DHAPKE					03	06		
75	SAKSHI OMKAR SOHALIYA	–							
76	SAMIKSHA GOUTAM KURVEKAR					03	07		
77	SANIYA VINOD DHOKE					05	05		
78	SAURABH SAHEBRAOJI BANNAGRE					07	06		
79	SHADAB RAMJAN SHEIKH	–							
80	SHAILI YOGRAJ CHORGHADE	–				04	07		
81	SHREYA PUNJAB DHAMDE	–							
82	SHUBHAM RAMGOPAL GUPTA	–				07	05		
83	SIMRAN SANJAY SATPUTE					04	06		
84	SWAPNIL RAJU DATIR								
85	SWAROOP RAJESH MALVE	–				07	07		
86	TANUSHRI ASHOK MURODIYE								
87	TARUN ANIL BEHNIYA	–							
88	TRUPTI PRAKASH YELKAR	–	T.P. Yelkar	T.P. Yelkar	T.P. Yelkar	05	05		
89	TUSHAR VILAS KUKADE	–							
90	VAISHNAVI SANJAY KENE					06	05		
91	VAISHNAVI SUDHAKAR BHAKTE					05	04		
92	VAISHNAVI PRALHAD DHAWAD	–				05	05		
93	VICKY RAVINDRA KAMBLE					02	05		
94	VIJAY HARISH PANCHBHAI	–							
95	VIVEK NARENDRASING BHADORIYA	–							
96	YASH LILADHAR GAYDHANE					04	07		

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya Katol

Bachelor of Business Administration (Semester II)

2023-24

Subject Environmental studies

Prof J. M. Patil

Sr.no	Students Name	ASSIGN I	II	III	IV	TEST I	II	III	IV
1	ABHIJIT SURENDRA WAROKAR					5	5		
2	ABHISHEK ASHOK SHIRODIYA					5			
3	ADITYA NANDKISHOR GHUSE		—	—		-			
4	AKANKSHA SANJAYRAO NASARE					5	4		
5	AKSHAY JAYPAL CHANDEL			—			1		
6	AKSHAY RAJENDRA FUTANE					2	0		
7	ALFIYA JAMIL BODHAR		—	—		-			
8	AMRUTA VINAYAK KAWADKAR					8	4		
9	~~AMRUTA VINAYAK KAWADKAR~~								
10	ANIKET BABLU THOSAR		—			-			
11	ANUJ PURUSHOTTAM THAKARE		—			2			
12	ANUJ SURENDRA SARODE		—	—		2			
13	ANUSHKA ARUN UMATHE					4			
14	ANUSHKA KISHOR BIDKAR			—		-			
15	ARYAN HEMRAJ KHAMBALKAR					2	1		
16	AYUSH PURUSHOTTAM KALE			—		-	3		
17	BHAKTI DASHRATH NANOTKAR			—		-	2		
18	BHAVANA SUNIL MAHAJAN			—		-	2		
19	BHUMI YUNESH DAWARE		—	—		-			
20	BHUMIKA RAJARAM BONDRE			—		-	4		
21	BHUMIKA RAJENDRA KALE					-	4		
22	BHUSHAN RAJESH NEHARE					-			
23	BUSHRA HAMID SHEIKH			—		-	3		
24	CHETNA MOHAN WANJARI						4		
25	DEVANSH SURESHRAO HIRUDKAR					0	0		
26	DHANASHRI SUDHAKAR NADEKAR			—		-	2		
27	DHANSHRI SHASHIKANT SOMKUWAR					6	4		
28	DISHA MANOJ KHEDKAR					6			
29	DIVYA RAJESH NASRE			—		-			
30	DIYA HIWARAJ KOCHE			—		-	4		
31	DOLLY RAVINDRA MALODE					5	2		
32	GAURAV GOPAL PALIWAL		—			-			
33	GAURAV SUDARSHAN CHOUDHARI					0	1		
34	GAURI SANJAY GHATE		—			-			
35	GAURI SURESH PATHADE					-	4		
36	GIRISH MANOHAR NASRE					-			
37	GUNJAN GOPAL GURAV					8	3		

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38	GUNJAN RAJU KATLAM						4	3	
39	HARSH BABARAOJI KALE								
40	HARSH RAVINDRA NAGMOTE								
41	HIMANSHU YADAORAO NAIK								
42	ISHANVI SANJAY YEOLE								
43	ISHIKA MOTILAL KUMERIYE						7	4	
44	JANHVI RAJU WALKE								
45	JANVI SATISHJI DUBEY						8	3	
46	JAY GAJANANRAO DIGHEKAR								
47	JAY NARENDRA DAWARE						2	2	
48	JITESH RAMESHRAO CHARPE							2	
49	KAJAL ANIL BARAI								
50	KALYANI ANANDRAO POTDAR							3	
51	KALYANI MANOHAR DHOLE						7	4	
52	KARAN DIWAKAR GAJBHIYE						8	3	
53	KARAN RAJESH JAISWAL								
54	KARTIK AVINASH KENE						2	2	
55	KARTIK CHANDAN RATHOD							0	
56	KARTIK PRAKASH SARODE						2	2	
57	KAUSHIK RAJESH BERAD							2	
58	KHUSHI RAMESH CHAUDHARI							3	
59	KIRAN CHARANJI WASNIK								
60	KOMAL AKASH MASANE							3	
61	LOKESH RAJENDRA CHARDE								
62	MAHESHWARI NILKANTH NEHARE						6		
63	MAITHALI VILAS BHUJADE								
64	MANASWI SHRIRAM SATFALE						5		
65	MANISH BABARAO BHOYAR							1	
66	NEHA SUDHAKAR DAWARE						6		
67	NIKHIL SANJAYRAO CHOPADE						2	3	
68	NISHA RAJENDRA KAPSE						4		
69	PAWANKUMAR MAROTRAO DHOLE								
70	PAYAL SUNIL MURODIYA								
71	PIYUSH RAMESH WANJARI								
72	PORNIMA DADARAO KAVADKAR						9	5	
73	PRAFUL PRAVIN THENGNE								
74	PRAJWAL ASHOK MANKAR							2	
75	PRANOTI ASHOK CHOUDHARI							3	
76	PRATHAM PADMAKAR UKEY								
77	PRATIKSHA SHESHRAO BANGAR						5	4	
78	PREM MANOJ NASARE						2		
79	RACHANA RAJENDRA GAWANDE								
80	RITESH PADMAKAR GULDHE								
81	RITISHA MUNIRAJ DHAMDE						7	2	
82	ROHAN RAMESHWAR DHAWAD								
83	ROSHANI DILIP MOHKAR						6	3	
84	RUCHITA RAJESH SOMKUWAR						3	3	
85	RUPESH SUBHASHRAO MADANKAR								
86	SAHIL RAJENDRA BADODE						1	2	
87	SAHIL RAVICHANDRA WAGHDHARE						1	2	

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88	SALONI JANARDHAN HARANE	—		—		—				
89	SALONIS DIPAK GAIKWAD	Salonj	Salonj	Salonj	Salonj	7	3			
90	SAMIKSHA SANJAY GIRI					10				
91	SAMIKSHA SHAKULAL SURYAVANSHI	Samiksha	Samiksha	Samiksha	Samiksha	1	5			
92	SANKET RAMCHANDRA GAKHARE	—		—		—				
93	SANKET SHAMRAO TAYWADE					—				
94	SANSKRUTI SHRINIVAS MANDAOGADE	Sanskruti	Sanskruti	—		—	2			
95	SHABRI SANJAY KHAPRE			—		4				
96	SHRUTI LAXMANRAO KATARE	S.L.Katare	S.L.Katare	S.L.Katare	S.L.Katare	9	4			
97	SHRUTIKA DIWAKAR DHORE	Dhore	Dhore	Dhore	Dhore	8				
98	SIDDHI DNYANESHWAR BHONDE	Bhonde	Bhonde	—	Bhonde	—				
99	SNEHA RAVINDRA ZOTING			—		—	1			
100	SNEHAL KISNA MANEKAR			—		—	3			
101	SUHANI SANJAYRAO LADKE	Suhani	Suhani	Suhani		5	4			
102	SUSHANT DEEPAK AMPARWAR	SUSHANT	Sushant	Sushant	Sushant	—				
103	SWATI RANJENDRA MOROLIYE			—		—				
104	TANVI MAROTRAO AMLE	TMAmle	TMAmle	—		—	5			
105	TINA RAVINDRA INGALE	Tingale	Tingale	Tingale	Tingale		3			
106	TRIVENI DHANRAJ THOMBARE	Thombare	Thombare	Thombare	Thombare	10	5			
107	UJAWAL ASHOK GADHAWE	U.A.Ghadhawe	U.A.Ghadhawe	—	U.A.Ghadhawe	—	0			
108	UJWALA YUVRAJ CHARDE	Uchavde	Uchavde	—	Uchavde	—	4			
109	VAIBHAV RAMAJI GHATODE	—	Vaibhav	Vaibhav		1	0			
110	VAISHNAVI ARVIND HINGAWE	—		—		—				
112	VANSHRI SHESHRAO CHARDE	Vchavde	Vchavde	Vchavde	Vchavde	5	2			
113	VEDANT MANOHAR HELONDE	Vmelonde		—	Vmelonde		2			
114	VEEDHI VILAS ZADE					7				
115	VIDHI SURENDRARAO RAUT	Vidhi	Vidhi	Vidhi	Vidhi	7				
116	VRUSHABH BHIMRAOJI NILATKAR	—		—		—				
117	YASH ASHOKRAO DALVI	—		—		—	1			
118	YASH JAIPRAKASH RAUT	Vrut	Vraut	—	Vrut	—				
119	YASH PRAKASH GHORMADE	Yash	Yash	—		—				
120	YASHASVI RAMESHRAO THAKARE	Thakare	Thakare	—		—	2			
	YOGISHRI SANJAY UIKEY	Yogishri	Yogishri	—	Uikey	—				
111	Vaishnavi Patankar	Vaishnavi	Vaishnavi	Vaishnavi	Patankar	6	3			

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya Katol

Bachelor of Business Administration (Semester III)

2023-24

Subject : SOCIOLOGY

Prof J. M. Patil Class-

Sr.no	Students Name	ASSIGN I	II	III	IV	TEST I	II	III	IV
1	ABHIJIT SURENDRA WAROKAR					6	8		
2	ABHISHEK ASHOK SHIRODIYA					6	9		
3	ADITYA NANDKISHOR GHUSE					5	7		
4	AKANKSHA SANJAYRAO NASARE					7	9		
5	AKSHAY JAYPAL CHANDEL					2	5		
6	AKSHAY RAJENDRA FUTANE					2	4		
7	ALFIYA JAMIL BODHAR		—			—			
8	AMRUTA VINAYAK KAWADKAR					7	9		
9	~~AMRUTA VINAYAK KAWADKAR~~								
10	ANIKET BABLU THOSAR					—			
11	ANUJ PURUSHOTTAM THAKARE		—			—			
12	ANUJ SURENDRA SARODE		—			—			
13	ANUSHKA ARUN UMATHE					5	7		
14	ANUSHKA KISHOR BIDKAR					6	5		
15	ARYAN HEMRAJ KHAMBALKAR					2	5		
16	AYUSH PURUSHOTTAM KALE		—			—			
17	BHAKTI DASHRATH NANOTKAR					—			
18	BHAVANA SUNIL MAHAJAN					—			
19	BHUMI YUNESH DAWARE					—			
20	BHUMIKA RAJARAM BONDRE					7	9		
21	BHUMIKA RAJENDRA KALE					—	5		
22	BHUSHAN RAJESH NEHARE					—	7		
23	BUSHRA HAMID SHEIKH					—	6		
24	CHETNA MOHAN WANJARI					7	8		
25	DEVANSH SURESHRAO HIRUDKAR					1	3		
26	DHANASHRI SUDHAKAR NADEKAR					4	7		
27	DHANSHRI SHASHIKANT SOMKUWAR					6	7		
28	DISHA MANOJ KHEDKAR					5	8		
29	DIVYA RAJESH NASRE					8	9		
30	DIYA HIWARAJ KOCHE					6	7		
31	DOLLY RAVINDRA MALODE					—	3		
32	GAURAV GOPAL PALIWAL					—			
33	GAURAV SUDARSHAN CHOUDHARI					7	4		
34	GAURI SANJAY GHATE					—	2		
35	GAURI SURESH PATHADE					6	8		
36	GIRISH MANOHAR NASRE		—			—			
37	GUNJAN GOPAL GURAV					6	8		

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38	GUNJAN RAJU KATLAM					3	4	
39	HARSH BABARAOJI KALE					-	-	
40	HARSH RAVINDRA NAGMOTE					-	-	
41	HIMANSHU YADAORAO NAIK					-	-	
42	ISHANVI SANJAY YEOLE					-	8	
43	ISHIKA MOTILAL KUMERIYE					5	7	
44	JANHVI RAJU WALKE					-	9	
45	JANVI SATISHJI DUBEY					-	5	
46	JAY GAJANANRAO DIGHEKAR					-		
47	JAY NARENDRA DAWARE					-		
48	JITESH RAMESHRAO CHARPE					-		
49	KAJAL ANIL BARAI					-		
50	KALYANI ANANDRAO POTDAR					6	7	
51	KALYANI MANOHAR DHOLE					5	8	
52	KARAN DIWAKAR GAJBHIYE					4	5	
53	KARAN RAJESH JAISWAL					-		
54	KARTIK AVINASH KENE					3	5	
55	KARTIK CHANDAN RATHOD					-		
56	KARTIK PRAKASH SARODE					4	7	
57	KAUSHIK RAJESH BERAD					-		
58	KHUSHI RAMESH CHAUDHARI					6	08	
59	KIRAN CHARANJI WASNIK					-		
60	KOMAL AKASH MASANE					5	9	
61	LOKESH RAJENDRA CHARDE					-		
62	MAHESHWARI NILKANTH NEHARE					-		
63	MAITHALI VILAS BHUJADE					8	9	
64	MANASWI SHRIRAM SATFALE					7	8	
65	MANISH BABARAO BHOYAR					-		
66	NEHA SUDHAKAR DAWARE					6	9	
67	NIKHIL SANJAYRAO CHOPADE					5	7	
68	NISHA RAJENDRA KAPSE					6	8	
69	PAWANKUMAR MAROTRAO DHOLE					-		
70	PAYAL SUNIL MURODIYA					-		
71	PIYUSH RAMESH WANJARI					-		
72	PORNIMA DADARAO KAVADKAR					8	9	
73	PRAFUL PRAVIN THENGNE					-	5	
74	PRAJWAL ASHOK MANKAR					-	7	
75	PRANOTI ASHOK CHOUDHARI					6	8	
76	PRATHAM PADMAKAR UKEY					-		
77	PRATIKSHA SHESHRAO BANGAR					6	9	
78	PREM MANOJ NASARE					4	8	
79	RACHANA RAJENDRA GAWANDE					6	7	
80	RITESH PADMAKAR GULDHE					-	4	
81	RITISHA MUNIRAJ DHAMDE					-	3	
82	ROHAN RAMESHWAR DHAWAD					-	-	
83	ROSHANI DILIP MOHKAR					4	8	
84	RUCHITA RAJESH SOMKUWAR					-	4	
85	RUPESH SUBHASHRAO MADANKAR					-	-	
86	SAHIL RAJENDRA BADODE					-	-	
87	SAHIL RAVICHANDRA WAGHDHARE					5	8	

MODE Coordinator

88	SALONI JANARDHAN HARANE	—	—			-			
89	SALONIS DIPAK GAIKWAD	Saloni	Saloni	Saloni	Saloni	8	07		
90	SAMIKSHA SANJAY GIRI					6	06		
91	SAMIKSHA SHAKULAL SURYAVANSHI	Samiksha	Samiksha			7	07		
92	SANKET RAMCHANDRA GAKHARE	—	—			-			
93	SANKET SHAMRAO TAYWADE	Sanket				-			
94	SANSKRUTI SHRINIVAS MANDAOGADE	Sanskruti	Kaul			-			
95	SHABRI SANJAY KHAPRE	Shabri Khapre	Shabri Khapre	Shabri Khapre	shabri khapre	5	03		
96	SHRUTI LAXMANRAO KATARE	Shruti Katare	Shruti Katare			6	06		
97	SHRUTIKA DIWAKAR DHORE	Shree	Shree	Shree	Shree	6	07		
98	SIDDHI DNYANESHWAR BHONDE	Siddhi	Siddhi	Siddhi	Siddhi	-			
99	SNEHA RAVINDRA ZOTING	Sneha				-			
100	SNEHAL KISNA MANEKAR	Snehal	Snehal	Snehal	Snehal	7	08		
101	SUHANI SANJAYRAO LADKE	Suhani	Suhani			5	05		
102	SUSHANT DEEPAK AMPARWAR	Sushant		Sushant		-			
103	SWATI RANJENDRA MOROLIYE	Swati	Swati			4	05		
104	TANVI MAROTRAO AMLE	Tanvi	Tanvi			8	09		
105	TINA RAVINDRA INGALE	Tina	Tina			4	05		
106	TRIVENI DHANRAJ THOMBARE	Thombare	Thombare	Thombare	Thombare	8	09		
107	UJAWAL ASHOK GADHAWE	—				-			
108	UJWALA YUVRAJ CHARDE	Ujwala	Ujwala			-			
109	VAIBHAV RAMAJI GHATODE	—	—			3	05		
110	VAISHNAVI ARVIND HINGAWE	✓	—			-			
112	VANSHRI SHESHRAO CHARDE	Vanshri	Charde	Charde	Patil	5	07		
113	VEDANT MANOHAR HELONDE	Vedant	—			-			
114	VEEDHI VILAS ZADE	Veedhi	Zade			6	07		
115	VIDHI SURENDRARAO RAUT	Vidhi	Vidhi	Vidhi	Vidhi	6	08		
116	VRUSHABH BHIMRAOJI NILATKAR	—	—			-			
117	YASH ASHOKRAO DALVI	—	—			-			
118	YASH JAIPRAKASH RAUT	Yash	Yash	Yash	Yash	-			
119	YASH PRAKASH GHORMADE	Yash	—	Yash	Yash	-			
120	YASHASVI RAMESHRAO THAKARE	Thakare	Thakare	Thakare	Thakare	-			
	YOGISHRI SANJAY UIKEY	Yogishri	—			6	07		
111	Vaishnavi Patankar	Patankar	Patankar			5	08		

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya Katol

BBA Department

Assignment Record Session 2023-24 (SEM IV)

Prof. J.M. Patil

sem IV

Subject- Indian Values & Business Ethics

SR. NO.	Name of Students	Asgn1	Asggn2	Asgn3	Asgn4	Test 1	Test 2 12/3/24	Test 3	Test 4
1	AAKANSHA NARENDRA METANGALE					09	08		
2	ABHISHEK GAJANAN CHAUDHARI	—							
3	ADITYA RAJU KUMERIYA	—							
4	ANIS MURTUJA SHEIKH	—							
5	ANSHUL NANESHWAR ANWANE								
6	ARNAV SANDEEP KHADKOTKAR	—							
7	ARPITA JIWANDAS MAHANT					09	07		
8	ARPITA RAMGOPAL SONONE								
9	ASHIKA PUNAJI TUMDAM	—				08	09		
10	ATIF AYYAZ JIWANI					06	10		
11	AVANTIKA SUBHASH BHAKTE					07	08		
12	AVINASH SURESH MURODIYA								
13	CHANDRADIP RAMDAS EDKE	—				06	09		
14	CHETAN PRALHAD KHANDARE	—				04	06		
15	CHETAN SITARAM KATHANE					05	07		
16	CHIRAG MANOJ PANDE	—							
17	DEVYANI KHEMRAJ GATHE					06	05		
18	DEVYANI BALWANTRAO WALKE					05	08		
19	DISHA SANJAY WANKHADE					07	07		
20	DIVYA SANJAY BALPANDE					08	06		
21	DURGESH GULAB BOBDE					06	07		
22	GAURAV BABAN NAGALE					07	05		
23	GAURAV RAJESH WAGHMARE	—							
24	GAURI JAGDISH UKEY	—							
25	HARSHAL SANJAY POTE	—					05		
26	HIMANSHU BHASKAR SAWADH	—							
27	HINGLAJ SHANKAR BHANGE	—							
28	ISHA TANAJI KUTHE					06	07		
29	ISHANK GOPAL KHUTATE					05	06		
30	JANAVHI GAJANAN KADU					07	08		
31	JAYESH SUNIL DHANDE	—							
32	KARAN MUKESH ARORA					08	09		
33	KHUSHI SANJAY PATHE	—				06	07		

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34	KIRAN PRAKASH KUMRE	—								
35	KRISHNA PRAVIN KADU	—								
36	KRUNAL DILIPRAO KALE	—								
37	KSHITIJ SUNIL BHANDWALKAR	—								
38	KULDIP DATTUJI BHADE	KDBhade	KDBhade	KDBhade	KDBhade	07	07			
39	KUNAL KISHOR PADOLIYA	Kpadoliya	Kpadoliya	Kpadoliya	Kpadoliya	09	06			
40	LALIT SANJAY NAVGHARE	—								
41	LINA DILIP BHASME	—								
42	LUKESH GANESH REWATKAR	—								
43	MARIA SHARFUDDIN SYED	Maria								
44	MEGHA RAJENDRA GIRADKAR	M.R.Giradkar	M.R Giradkar	M.R Giradkar	M.R Giradkar	08	05			
45	MISS. NEHA NARAYANRAO HAJARE	Nhajare	Nhajare	Nhajare	Nhajare	06	08			
46	MOHIT NAMDEV GHAGRE	—				05	07			
47	NAJUKA PRAMOD GHORMADE									
48	NASIBA ASGAR SHEIKH	—								
49	OMKAR DINKAR PATIL	O.D.Patil				06	07			
50	PIYUSH KISHOR JADHAV	P.S.Jadhav				05	06			
51	PIYUSH KESHAO JAULKAR	—								
52	PRAGATI DILIP GAWALI	Pgawali	Pgawali	Pgawali	Pgawali	09	08			
53	PRANALI SHANKAR RAUT	P.S.Raut	P.S.Raut	P.S.Raut	P.S.Raut	09	07			
54	PRANAY RUKHMANAND BHISEKAR	Pbhisekar	Pbhisekar	Pbhisekar	Pbhisekar	07	08			
	PRANAY FISKE	—								
55	PRATIK GANPAT YAMDE	—	Pyamde	Pyamde	Pyamde	05	07			
56	PRATIK ARJUNRAO CHARPE	—								
57	PRAVEEN ASHOK WANJARI	Pwanjari				07	08			
58	PREETI MOHAN DONGRE	—								
59	PUJA ARUN CHEDGE	Pchedge	Pchedge	Pchedge	Pchedge	06	08			
60	RAHUL ONKAR MATE	—								
61	RAJKUMAR MAROTRAO DHURVE	—								
62	RAKESH DASHRATH KALAMBHE	—	R.D.Kalambhe	R.D.Kalambhe	R.D.Kalambhe	08	05			
63	RITESH VINAYAK THAKRE	RVthakre	RVthakre	RVthakre	RVthakre	07	07			
64	RITESH CHHATRAPATI DHOPRE	—								
65	RITIK RAMBHAU REWATKAR	Rrewatkar	Rrewatkar	Rrewatkar	Rrewatkar	05	07			
66	ROHITKUMAR MADANLAL PRAJAPATI	Rprajapati	Rprajapati	Rprajapati	Rprajapati	07	08			
67	ROSHAN NAMDEO DEWASE	—	Rdewase	Rdewase	Rdewase	06	05			
68	RUCHIKA SUNIL THAWLE	Rthawle	Rthawle	Rthawle	Rthawle	09	04			
69	RUTUJA HARESHWARJI BASEWAR	RBasewar				03	02			
70	RUTVIK JAYRAM HINGVE	—								
71	SAGAR SHANKARRAO GAIKWAD	—								

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72	SAHIL SANJAY MESHRAM	Sahil	Sahil	Sahil	Sahil	04	07		
73	SAKSHI DNYANESHWAR MANGAL	Mangal				05	06		
74	SAKSHI BANDU DHAPKE	Dhapke	Dhapke	Dhapke	Dhapke	07	07		
75	SAKSHI OMKAR SOHALIYA	—							
76	SAMIKSHA GOUTAM KURVEKAR					09	08		
77	SANIYA VINOD DHOKE	S.V. Dhoke	S.V. Dhoke	S.V. Dhoke	S.V. Dhoke	08	08		
78	SAURABH SAHEBRAOJI BANNAGRE	S.S. Bannagre	S.S. Bannagre	S.S. Bannagre	S.S. Bannagre	08	07		
79	SHADAB RAMJAN SHEIKH	—							
80	SHAILI YOGRAJ CHORGHADE					04	05		
81	SHREYA PUNJAB DHAMDE	—							
82	SHUBHAM RAMGOPAL GUPTA	—				07	03		
83	SIMRAN SANJAY SATPUTE					07	05		
84	SWAPNIL RAJU DATIR	—							
85	SWAROOP RAJESH MALVE					05	07		
86	TANUSHRI ASHOK MURODIYE	—							
87	TARUN ANIL BEHNIYA	—							
88	TRUPTI PRAKASH YELKAR	T. Yelkar	T. Yelkar	T. Yelkar	T. Yelkar	08	07		
89	TUSHAR VILAS KUKADE	—							
90	VAISHNAVI SANJAY KENE					07	05		
91	VAISHNAVI SUDHAKAR BHAKTE								
92	VAISHNAVI PRALHAD DHAWAD	—				06	07		
93	VICKY RAVINDRA KAMBLE					08	07		
94	VIJAY HARISH PANCHBHAI	—							
95	VIVEK NARENDRASING BHADORIYA	—							
96	YASH LILADHAR GAYDHANE	—							
97	Krutika Sakariya	—							

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NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA THIRD SEMESTER 2023-24

Prof. J. M. Patil — Content Writing

Sr. No.	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
1	AAKANSHA NARENDRA METANGALE	Aakan	10	Aakansh	9	Aakansha		Aakansha	
2	ABHISHEK GAJANAN CHAUDHARI								
3	ADITYA RAJU KUMERIYA		7		6				
4	ANIS MURTUJA SHEIKH								
5	ANSHUL NANESHWAR ANWANE	Anshul	8	Anshul	8	Anshul		Anshul	
6	ARNAV SANDEEP KHADKOTKAR								
7	ARPITA JIWANDAS MAHANT	Arpita	10	Arpita	8				
8	ARPITA RAMGOPAL SONONE	A.R. Sonone	7	A.R. Sonone	7	A.R. Sonone		A.R. Sonone	
9	ASHIKA PUNAJI TUMDAM	A.P. Tumdam	8	A.P. Tumdam	6	A.P. Tumdam		A.P. Tumdam	
10	ATIF AYYAZ JIWANI		10		9				
11	AVANTIKA SUBHASH BHAKTE		9		8				
12	AVINASH SURESH MURODIYA		8		6				
13	CHANDRADIP RAMDAS EDKE	Edkey	3	Edkey	5	Edkey		Edkey	
14	CHETAN PRALHAD KHANDARE	C.K	3	C.K	6	C.K			
15	CHETAN SITARAM KATHANE	C.S.Kathane	4	C.S.Kathane	4	C.S.Kathane		C.S. Kathane	
16	CHIRAG MANOJ PANDE								
17	DEVYANI KHEMRAJ GATHE		8		7				
18	DEVYANI BALWANTRAO WALKE	D.B.Walke	7	D.B.Walke	8	D.B.Walke		D.B.Walke	
19	DISHA SANJAY WANKHADE	D. Wankhade	10	D. Wankhade	9	D. Wankhade		D. Wankhade	
20	DIVYA SANJAY BALPANDE	D.S. Balpande	10	D.S. Balpande	8	D.S. Balpande		D.S. Balpande	
21	DURGESH GULAB BOBDE		9		8				
22	GAURAV BABAN NAGALE								
23	GAURAV RAJESH WAGHMARE		7		6				
24	GAURI JAGDISH UKEY	Ukey	8	Ukey	9	Ukey			
25	HARSHAL SANJAY POTE		10		9				
26	HIMANSHU BHASKAR SAWADH								
27	HINGLAJ SHANKAR BHANGE								
28	ISHA TANAJI KUTHE	I.T. kuthe	10	I.T. kuthe	10	I.T. kuthe		I.T. kuthe	
29	ISHANK GOPAL KHUTATE		9		8				
30	JANAVHI GAJANAN KADU		8		9				
31	JAYESH SUNIL DHANDE								
32	KARAN MUKESH ARORA		10		10				

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N.M.V. Katol

	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
33	KHUSHI SANJAY PATHE	Khushi	9	Khushi	9	Khushi			
34	KIRAN PRAKASH KUMRE	Kiran	7	Kiran	7	Kiran		Kiran	
35	KRISHNA PRAVIN KADU	Krishna	8	Krishna	7	Krishna		Krishna	
36	KRUNAL DILIPRAO KALE								
37	KSHITIJ SUNIL BHANDWALKAR								
38	KULDIP DATTUJI BHADE	KDBhade	7	KDBhade	7	KDBhade			
39	KUNAL KISHOR PADOLIYA	Kpadoliya	8	Kpadoliya	8	Kpadoliya		Kpadoliya	
40	LALIT SANJAY NAVGHARE	Lalit	7	Lalit	9	Lalit		Lalit	
41	LINA DILIP BHASME	Lina.	9	Lina.	9	Lina.		Lina.	
42	LUKESH GANESH REWATKAR								
43	MARIA SHARFUDDIN SYED	Maria	10	Maria	9	Maria		Maria	
44	MEGHA RAJENDRA GIRADKAR	M.R.Giradkar	9	M.R.Giradkar	9	M.R Giradkar		M.R Giradkar	
45	MISS. NEHA NARAYANRAO HAJARE	Nhajare	10	Nhajare	8	Nhajare		Nhajare	
46	MOHIT NAMDEV GHAGRE	MGHAGRE	10	MGHAGRE	8	MGHAGRE.			
47	NAJUKA PRAMOD GHORMADE		9		9				
48	NASIBA ASGAR SHEIKH								
49	OMKAR DINKAR PATIL								
50	PIYUSH KISHOR JADHAV								
51	PIYUSH KESHAO JAULKAR								
52	PRAGATI DILIP GAWALI	Pgawali	9	Pgawali	7	Pgawali		Pgawali	
53	PRANALI SHANKAR RAUT	P.S.Raut	8	P.S.Raut	8				
54	PRANAY RUKHMANAND BHISEKAR	Pranay	9	Pranay	9	Pranay		Pranay	
55	PRATIK GANPAT YAMDE	Pyamde	8	Pyamde	7	Pyamde			
56	PRATIK ARJUNRAO CHARPE								
57	PRAVEEN ASHOK WANJARI								
58	PREETI MOHAN DONGRE	Preeti	7	Preeti	9	Preeti		Preeti	
59	PUJA ARUN CHEDGE	Pchedge	8	Pchedge	8	Pchedge		Pchedge	
60	RAHUL ONKAR MATE								
61	RAJKUMAR MAROTRAO DHURVE	Rajkumar	9	Rajkumar	5	Rajkumar		Rajkumar	
62	RAKESH DASHRATH KALAMBHE								
63	RITESH VINAYAK THAKRE	RVthakre	8	RVthakre	9	RVthakre			
64	RITESH CHHATRAPATI DHOPRE	Rdhopre	9	Rdhopre	8	Rdhopre		Rdhopre	
65	RITIK RAMBHAU REWATKAR	R.Rewatkar	7	R.Rewatkar	7	R.Rewatkar		R.Rewatkar	
66	ROHITKUMAR MADANLAL PRAJAPATI	Rohitkumar	10	Rohitkumar	9	Rohitkumar			
67	ROSHAN NAMDEO DEWASE	Rdewase	8	Rdewase	8	Rdewase		Rdewase	
68	RUCHIKA SUNIL THAWLE	Rthawale	9	Rthawale	9	Rthawale		Rthawale	
69	RUTUJA HARESHWARJI								

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	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
	BASEWAR		6		7				
70	RUTVIK JAYRAM HINGVE								
71	SAGAR SHANKARRAO GAIKWAD		8		8				
72	SAHIL SANJAY MESHRAM		9		10				
73	SAKSHI DNYANESHWAR MANGAL		8		9				
74	SAKSHI BANDU DHAPKE		7		7				
75	SAKSHI OMKAR SOHALIYA								
76	SAMIKSHA GOUTAM KURVEKAR		6		6				
77	SANIYA VINOD DHOKE	S.V. dhoke	9	S.V. dhoke	8	S.V. dhoke		S.V. dhoke	
78	SAURABH SAHEBRAOJI BANNAGRE	S.S. Bannagre	7	S.S. Bannagre	7	S.S. Bannagre			
79	SHADAB RAMJAN SHEIKH		7		7				
80	SHAILI YOGRAJ CHORGHADE		7		6				
81	SHREYA PUNJAB DHAMDE		9		9				
82	SHUBHAM RAMGOPAL GUPTA	S.R. Gupta	9	S.R. Gupta	8	S.R. Gupta			
83	SIMRAN SANJAY SATPUTE		7		6				
84	SWAPNIL RAJU DATIR	S. Datir	8	S. Datir	7	S. Datir		S. Datir	
85	SWAROOP RAJESH MALVE		9		9				
86	TANUSHRI ASHOK MURODIYE		8		9				
87	TARUN ANIL BEHNIYA								
88	TRUPTI PRAKASH YELKAR	T.P. Yelkar	10	T.P. Yelkar	10	T.P. Yelkar		T.P. Yelkar	
89	TUSHAR VILAS KUKADE								
90	VAISHNAVI SANJAY KENE		8		7				
91	VAISHNAVI SUDHAKAR BHAKTE	V.S. Bhakte	9	V.S. Bhakte	7	V.S. Bhakte		V.S. Bhakte	
92	VAISHNAVI PRALHAD DHAWAD	V.P. Dhawad	9	V.P. Dhawad	6	V.P. Dhawad		V.P. Dhawad	
93	VICKY RAVINDRA KAMBLE		10		10				
94	VIJAY HARISH PANCHBHAI								
95	VIVEK NARENDRASING BHADORIYA								
96	YASH LILADHAR GAYDHANE	Gaydhane	7	Gaydhane	8	Gaydhane			
97	Krutika Sakariya		7		6				

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N.M.V. Katol

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA THIRD SEMESTER 2023-24

J. M. Patil — Organisational Behaviour

Sr. No.	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
1	AAKANSHA NARENDRA METANGALE	Aakansh	04	Aakans	05	Aakansh		Aakansh	
2	ABHISHEK GAJANAN CHAUDHARI								
3	ADITYA RAJU KUMERIYA		7		6				
4	ANIS MURTUJA SHEIKH								
5	ANSHUL NANESHWAR ANWANE	Anshul	5	Anshul	5	Anshul			
6	ARNAV SANDEEP KHADKOTKAR								
7	ARPITA JIWANDAS MAHANT		7		7				
8	ARPITA RAMGOPAL SONONE	A.R. Sonone	6	A.R. Sonone	7	A.R. Sonone		A.R. Sonone	
9	ASHIKA PUNAJI TUMDAM	A.P. Tumdam	7	A.P. Tumdam	5	A.P. Tumdam		A.P. Tumdam	
10	ATIF AYYAZ JIWANI		8		8				
11	AVANTIKA SUBHASH BHAKTE		6		7				
12	AVINASH SURESH MURODIYA		6		8				
13	CHANDRADIP RAMDAS EDKE		7		6				
14	CHETAN PRALHAD KHANDARE		5		4				
15	CHETAN SITARAM KATHANE	C.S.kathane	5	C.S.kathane	3	C.S.kathane		C.S.kathane	
16	CHIRAG MANOJ PANDE								
17	DEVYANI KHEMRAJ GATHE		8		8				
18	DEVYANI BALWANTRAO WALKE	D.B.Walke	7	D.B.Walke	6	D.B.Walke		D.B.Walke	
19	DISHA SANJAY WANKHADE	D.wankhade	7	D.wankhade	7	D.wankhade		D.wankhade	
20	DIVYA SANJAY BALPANDE	D.S.Balpande	8	D.S.Balpande	5	D.S.Balpande		D.S.Balpande	
21	DURGESH GULAB BOBDE		6		7				
22	GAURAV BABAN NAGALE								
23	GAURAV RAJESH WAGHMARE		7		6				
24	GAURI JAGDISH UKEY								
25	HARSHAL SANJAY POTE		6		5				
26	HIMANSHU BHASKAR SAWADH								
27	HINGLAJ SHANKAR BHANGE								
28	ISHA TANAJI KUTHE	I.T.kuthe	6	I.T.kuthe	5	I.T.kuthe		I.T.kuthe	
29	ISHANK GOPAL KHUTATE		7		8				
30	JANAVHI GAJANAN KADU		7		6				
31	JAYESH SUNIL DHANDE								
32	KARAN MUKESH ARORA		8		5				

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NMM Katol

No.	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
33	KHUSHI SANJAY PATHE	Khushi	6	Khushi	8	Khushi			
34	KIRAN PRAKASH KUMRE	Kiran	7	Kiran	3	Kiran		Kiran	
35	KRISHNA PRAVIN KADU	Krishna	8	Krishna	8	Krishna		Krishna	
36	KRUNAL DILIPRAO KALE								
37	KSHITIJ SUNIL BHANDWALKAR								
38	KULDIP DATTUJI BHADE	KDBhade	5	KDBhade	6	KDBhade			
39	KUNAL KISHOR PADOLIYA	Kpadaliya	6	Kpadaliya	6	Kpadaliya		Kpadaliya	
40	LALIT SANJAY NAVGHARE								
41	LINA DILIP BHASME	Lina	7	Lina	7	Lina		Lina	
42	LUKESH GANESH REWATKAR								
43	MARIA SHARFUDDIN SYED	Maria	8	Maria	6	Maria		Maria	
44	MEGHA RAJENDRA GIRADKAR	M.R Giradkar	7	M.R Giradkar	7	M.R Giradkar		M.R Giradkar	
45	MISS. NEHA NARAYANRAO HAJARE	Nhajare	8	Nhajare	7	Nhajare		Nhajare	
46	MOHIT NAMDEV GHAGRE	Ghagre	5	Ghagre	4	Ghagre			
47	NAIUKA PRAMOD GHORMADE		4		5				
48	NASIBA ASGAR SHEIKH								
49	OMKAR DINKAR PATIL								
50	PIYUSH KISHOR JADHAV								
51	PIYUSH KESHAO JAULKAR								
52	PRAGATI DILIP GAWALI	Pgawali	7	Pgawali	8	Pgawali		Pgawali	
53	PRANALI SHANKAR RAUT	P.S.Raut	8	P.S.Raut	6				
54	PRANAY RUKHMANAND BHISEKAR		7		6				
55	PRATIK GANPAT YAMDE	Pyamde	7	Pyamde	6	Pyamde			
56	PRATIK ARJUNRAO CHARPE								
57	PRAVEEN ASHOK WANJARI								
58	PREETI MOHAN DONGRE	Preeti	5	Preeti	6	Preeti		Preeti	
59	PUJA ARUN CHEDGE	Pchedge	7	Pchedge	5	Pchedge		Pchedge	
60	RAHUL ONKAR MATE								
61	RAJKUMAR MAROTRAO DHURVE								
62	RAKESH DASHRATH KALAMBHE								
63	RITESH VINAYAK THAKRE	RThakre	8	RThakre	6	RThakre			
64	RITESH CHHATRAPATI DHOPRE	Ritesh	5	Ritesh	4	Ritesh		Ritesh	
65	RITIK RAMBHAU REWATKAR	R.Rawatkar	4	R.Rawatkar	3	R.Rawatkar			
66	ROHITKUMAR MADANLAL PRAJAPATI	Rohitprajapati	6	Rohitprajapati	7	Rohitprajapati			
67	ROSHAN NAMDEO DEWASE	Rawat	3	Rawat	5	Rawat			
68	RUCHIKA SUNIL THAWLE	Rthawale	5	Rthawale	6	Rthawale		Rthawale	
69	RUTUJA HARESHWARJI								

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r. No.	Name of Student	Assignment 1	T 1	Assignment 2	T 2	Assignment 3	T 3	Assignment 4	T 4
	BASEWAR		6		7				
70	RUTVIK JAYRAM HINGVE								
71	SAGAR SHANKARRAO GAIKWAD		7		5				
72	SAHIL SANJAY MESHRAM		3		4				
73	SAKSHI DNYANESHWAR MANGAL		3		5				
74	SAKSHI BANDU DHAPKE		5		7				
75	SAKSHI OMKAR SOHALIYA								
76	SAMIKSHA GOUTAM KURVEKAR		7		8				
77	SANIYA VINOD DHOKE	S.V. Dhoke	6	S.V. Dhoke	8	S.V. Dhoke		S.V. Dhoke	
78	SAURABH SAHEBRAOJI BANNAGRE	S.S. Bannagre	7	S.S. Bannagre	6	S.S. Bannagre			
79	SHADAB RAMJAN SHEIKH		3		5				
80	SHAILI YOGRAJ CHORGHADE		4		7				
81	SHREYA PUNJAB DHAMDE		5		8				
82	SHUBHAM RAMGOPAL GUPTA	S. Gupta	8	S. Gupta	9	S. Gupta			
83	SIMRAN SANJAY SATPUTE		9		8				
84	SWAPNIL RAJU DATIR	S. Datir	5	S. Datir	6	S. Datir			
85	SWAROOP RAJESH MALVE		7		6				
86	TANUSHRI ASHOK MURODIYE		8		7				
87	TARUN ANIL BEHNIYA								
88	TRUPTI PRAKASH YELKAR	T. P. Yelkar	5	T. P. Yelkar	6	T. P. Yelkar		T. P. Yelkar	
89	TUSHAR VILAS KUKADE								
90	VAISHNAVI SANJAY KENE		7		6				
91	VAISHNAVI SUDHAKAR BHAKTE		8		6				
92	VAISHNAVI PRALHAD DHAWAD	V. P. Dhawad	7	V. P. Dhawad	7	V. P. Dhawad		V. P. Dhawad	
93	VICKY RAVINDRA KAMBLE		10		10				
94	VIJAY HARISH PANCHBHAI								
95	VIVEK NARENDRASING BHADORIYA								
96	YASH LILADHAR GAYDHANE	Gaydhane	7	Gaydhane	6	Gaydhane			
97	Krutika Sakariya	Sakariya	6	Sakariya	5	Sakariya			

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NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIFTH SEMESTER 2023-24
ASSIGNMENT AND TEST RECORD (POM)

J. M. Pathi

POM.

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
1	ABHAY SANJAY SATPUTE	Satpute	07	Satpute	05				
2	ABHISHEK RAMBHAU MESHRAM								
3	ANKIT UTTAMRAO GONDANE	Gondane	06	Gondane	08	Gondane		Gondane	
4	ANUSHKA DEVCHANDRA DAHALE								
5	ASMITA GANPATRAO GEDAM	Agedam	09	Agedam	08				
6	BHAGYASHRI KISANAJI HIWARKAR	B.K. Hiwarkar	10	B.K. Hiwarkar	08	B.K. Hiwarkar		B.K. Hiwarkar	
7	BHAVESH RAJENDRA KALAMBHE	Bhalke	08	Bhalke	07	Bhalke		Bhalke	
8	DHANSHRI SURESH TEKAM	D.Tekam	06	D.Tekam	07				
9	HARISH DHANRAJ WARTHI	Hwarthi	07	Hwarthi	07				
10	KAJAL BHAGWAT KOLHE	KBKolhe	08	KBKolhe	06				
11	KARAN SUNIL MOHARIYA								
12	KHUSHALI GUNVANTA MAHORIYA	Pmaharia	07	Pmaharia	08	Pmaharia		Pmaharia	
13	KOMAL MANOHAR SONULKAR	KSonulkar	08	KSonulkar	08	KSonulkar		KSonulkar	
14	LAVKESH MAHADEO GIRI								
15	LOVE RAJESH DHOKE								
16	LUKESH PURUSHOTTAM CHARDE								
17	MAHESH NARENDRA KOLHE		07		08				
18	MANOJ RAMESH SAWARKAR	manoj	06	manoj	08				
19	MAST. VAIBHAV SURESHRAO CHOPADE								
20	MUSKAN AYUB PATHAN	MAfathan	05	MAfathan	06	MAfathan		MAfathan	
21	NAYAN DNYANESHWAR JIWATODE	Njiwatode	08	Njiwatode	06				

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BBA Department
N.M.V. Katol

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
22	NIKHIL RAMESHRAO SHIRPURKAR		07		07				
23	NISHA BABAN CHARDE		08		08				
24	PAWAN RAVINDRA PATIL				A				
25	PAWAN MANOJ HARJAL		06		06				
26	PAYAL PRAMOD NEHARE		06						
27	PAYAL KISHOR MAKODE		08		05				
28	POOJA MADAN BOBADE		08		05				
29	PRACHI PRAMOD NEHARE		09		06				
30	PRAJWAL BHOJRAJ KALE								
31	PRAKRUTI KRUSHNAMURTI PATHAK								
32	PRANALI NIRANJAN NASARE		08		08				
33	PRANALI GUNWANT DESHMUKH		07		07				
34	PRANAY BANDUJI YEWALE		05		08				
35	PRANJALI RAMESH CHOPDE		09		07				
36	PRIYANKA RAVINDRARAO DONGARE		08		07				
37	RASIKA DINESHRAO KOLAMKAR								
38	RITIK RUPCHAND RAMOD								
39	ROCHAK SHARAD KALE		08		09				
40	ROHINI VILAS BHONGALE		06		07				
41	RUPESH RAMKRUSHNA RAUT		07		08				
42	SAHIL SURYAKANT GAIKWAD		04		05				
43	SAHIL GANESH WAGH								
44	SAMIKSHA MAHADEVRAO SURJUSE		05		06				
45	SAMMED ANIL PADOLE								
46	SHAHID AKBAR SHEIKH								

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BBA Department
N.M.V. Katol

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
47	SHIVANI MUKUNDRAO BHAKTE								
48	SHOAIB MEHABOOB SHEIKH								
49	SOUMYAK SURENDRAKUMAR NAGDEVE	S.S.Nagdeve	07	S.S.Nagdeve	07	S.S.Nagdeve		S.S.Nagdeve	
50	SWAPNIL NATTHU KHAIRKAR								
51	TANUJA RAJESHRAO NASRE	Tnasre	06	Tnasre	06	Tnasre		Tnasre	
52	TRUPTI SHESHRAOJI SAWDE	Tsawad	05	Tsawad	07				

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N.M.V. Katol

Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) First Semester (2023-24)

Subject – English-I

out of 25 (unit test).

	Name of the Students	UNIT TEST-I	UNIT TEST-II	UNIT TEST-III	UNIT TEST-IV
1	ABHIJIT SURENDRA WAROKAR	10	–		
2	ABHISHEK ASHOK SHIRODIYA	15	15	15	10
3	ADITYA NANDKISHOR GHUSE	09	07		–
4	AKANKSHA SANJAYRAO NASARE	–	–	19	–
5	AKSHAY JAYPAL CHANDEL	–	–	20	18
6	AKSHAY RAJENDRA FUTANE	10	15	17	–
7	ALFIYA JAMIL BODHAR	21	16	15	10
8	AMRUTA VINAYAK KAWADKAR	–	–	16	00
9	AMRUTA VINAYAK KAWADKAR	08	–	09	03
10	ANIKET BABLU THOSAR	–	07	15	
11	ANUJ PURUSHOTTAM THAKARE	21	11	13	10
12	ANUJ SURENDRA SARODE	–	20	–	
13	ANUSHKA ARUN UMATHE	18	15	20	21
14	ANUSHKA KISHOR BIDKAR	20	10	17	
15	ARYAN HEMRAJ KHAMBALKAR		13	18	07
16	AYUSH PURUSHOTTAM KALE	10	13		10
17	BHAKTI DASHRATH NANOTKAR	–	15	15	
18	BHAVANA SUNIL MAHAJAN	–		17	18
19	BHUMI YUNESH DAWARE	15	12		10
20	BHUMIKA RAJARAM BONDRE			20	18
21	BHUMIKA RAJENDRA KALE	15	18	17	17
22	BHUSHAN RAJESH NEHARE				10
23	BUSHRA HAMID SHEIKH	15.	10	15	20
24	CHETNA MOHAN WANJARI		20	15	18
25	DEVANSH SURESHRAO HIRUDKAR	15		08	17
26	DHANASHRI SUDHAKAR NADEKAR	–	10	13	10
27	DHANSHRI SHASHIKANT SOMKUWAR	10	05	09	10
28	DISHA MANOJ KHEDKAR		08		
29	DIVYA RAJESH NASRE	15	12	10	10
30	DIYA HIWARAJ KOCHE	15	10	15	11
31	DOLLY RAVINDRA MALODE	–		17	11
32	GAURAV GOPAL PALIWAL	15	15	10	10
33	GAURAV SUDARSHAN CHOUDHARI	10		15	
34	GAURI SANJAY GHATE	–	17	–	20
35	GAURI SURESH PATHADE	–	–	–	05.
36	GIRISH MANOHAR NASRE				
37	GUNJAN GOPAL GURAV				

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38	GUNJAN RAJU KATLAM	15			
39	HARSH BABARAOJI KALE		15		15
40	HARSH RAVINDRA NAGMOTE	15			
41	HIMANSHU YADAORAO NAIK		14	17	15
42	ISHANVI SANJAY YEOLE	8			
43	ISHIKA MOTILAL KUMERIYE		15	09	10
44	JANHVI RAJU WALKE	15			
45	JANVI SATISHJI DUBEY		18	-8	-10
46	JAY GAJANANRAO DIGHEKAR	10			
47	JAY NARENDRA DAWARE	15	17	18	18
48	JITESH RAMESHRAO CHARPE		15	14	
49	KAJAL ANIL BARAI	15	20	20	18
50	KALYANI ANANDRAO POTDAR				15
51	KALYANI MANOHAR DHOLE	15	15		
52	KARAN DIWAKAR GAJBHIYE		17		8
53	KARAN RAJESH JAISWAL			17	
54	KARTIK AVINASH KENE	15	17		17
55	KARTIK CHANDAN RATHOD			18	
56	KARTIK PRAKASH SARODE	14	15		18
57	KAUSHIK RAJESH BERAD	05		07	10
58	KHUSHI RAMESH CHAUDHARI				15
59	KIRAN CHARANJI WASNIK	15	15		
60	KOMAL AKASH MASANE			18	17
61	LOKESH RAJENDRA CHARDE	15			
62	MAHESHWARI NILKANTH NEHARE	18	20	-	15
63	MAITHALI VILAS BHUJADE				15
64	MANASWI SHRIRAM SATFALE	15		18	16
65	MANISH BABARAO BHOYAR		15		17
66	NEHA SUDHAKAR DAWARE			17	
67	NIKHIL SANJAYRAO CHOPADE	13	15	17	15
68	NISHA RAJENDRA KAPSE				
69	PAWANKUMAR MAROTRAO DHOLE		14	20	16
70	PAYAL SUNIL MURODIYA	12		14	09
71	PIYUSH RAMESH WANJARI	15			16
72	PORNIMA DADARAO KAVADKAR		15	14	15
73	PRAFUL PRAVIN THENGNE	15	16	14	
74	PRAJWAL ASHOK MANKAR	18			12
75	PRANOTI ASHOK CHOUDHARI	17	18		15
76	PRATHAM PADMAKAR UKEY	13	13	16	18
77	PRATIKSHA SHESHRAO BANGAR		14	21	
78	PREM MANOJ NASARE	12	15		15
79	RACHANA RAJENDRA GAWANDE	15			
80	RITESH PADMAKAR GULDHE		15	17	10
81	RITISHA MUNIRAJ DHAMDE	17			15
82	ROHAN RAMESHWAR DHAWAD			15	
		15	15		15
83	ROSHANI DILIP MOHKAR			17	
84	RUCHITA RAJESH SOMKUWAR	10	20		15
85	RUPESH SUBHASHRAO MADANKAR		12	15	16
86	SAHIL RAJENDRA BADODE	17	21	20	18

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87	SAHIL RAVICHANDRA WAGHDHARE	15	16	13	14
88	SALONI JANARDHAN HARANE	17	07	018	18
89	SALONIS DIPAK GAIKWAD	11	15		
90	SAMIKSHA SANJAY GIRI	15		15	17
91	SAMIKSHA SHAKULAL SURYAVANSHI	17	20		15
92	SANKET RAMCHANDRA GAKHARE	15	20	07	014
93	SANKET SHAMRAO TAYWADE		15	15	
94	SANSKRUTI SHRINIVAS MANDAOGADE	20	18	20	15
95	SHABRI SANJAY KHAPRE	15			08
96	SHRUTI LAXMANRAO KATARE		15	15	07
97	SHRUTIKA DIWAKAR DHORE		17		15
98	SIDDHI DNYANESHWAR BHONDE			13	16
99	SNEHA RAVINDRA ZOTING	15	12	11	18
100	SNEHAL KISNA MANEKAR	12	18	15	15
101	SUHANI SANJAYRAO LADKE				
102	SUSHANT DEEPAK AMPARWAR	19	15		17
103	SWATI RANJENDRA MOROLIYE	15		17	17
104	TANVI MAROTRAO AMLE		18		
105	TINA RAVINDRA INGALE	19		15	14
106	TRIVENI DHANRAJ THOMBARE		15	16	13
107	UJAWAL ASHOK GADHAWE				
108	UJWALA YUVRAJ CHARDE	15		15	18
109	VAIBHAV RAMAJI GHATODE	12	17	21	-
110	VAISHNAVI ARVIND HINGAWE	17		12	18
111	VAISHNAVI VISHNUJI PATANKAR		15		
112	VANSHRI SHESHRAO CHARDE	13			15
113	VEDANT MANOHAR HELONDE		10	15	
114	VEEDHI VILAS ZADE	16			18
115	VIDHI SURENDRARAO RAUT	15	15	17	
116	VRUSHABH BHIMRAOJI NILATKAR				20
117	YASH ASHOKRAO DALVI			15	18
118	YASH JAIPRAKASH RAUT	15	15	18	20
119	YASH PRAKASH GHORMADE				17
120	YASHASVI RAMESHRAO THAKARE	10	15	20	18
	YOGISHRI SANJAY UIKEY	15	18	-	13

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) First Semester (2023-24)

Subject – English-I

	Name of the Students	Assignment	Assignment	Assignment	Assignment
1	ABHIJIT SURENDRA WAROKAR				
2	ABHISHEK ASHOK SHIRODIYA				
3	ADITYA NANDKISHOR GHUSE				
4	AKANKSHA SANJAYRAO NASARE				
5	AKSHAY JAYPAL CHANDEL				
6	AKSHAY RAJENDRA FUTANE				
7	ALFIYA JAMIL BODHAR				
8	AMRUTA VINAYAK KAWADKAR				
9	AMRUTA VINAYAK KAWADKAR				
10	ANIKET BABLU THOSAR				
11	ANUJ PURUSHOTTAM THAKARE				
12	ANUJ SURENDRA SARODE				
13	ANUSHKA ARUN UMATHE				
14	ANUSHKA KISHOR BIDKAR				
15	ARYAN HEMRAJ KHAMBALKAR				
16	AYUSH PURUSHOTTAM KALE				
17	BHAKTI DASHRATH NANOTKAR				
18	BHAVANA SUNIL MAHAJAN				
19	BHUMI YUNESH DAWARE				
20	BHUMIKA RAJARAM BONDRE				
21	BHUMIKA RAJENDRA KALE				
22	BHUSHAN RAJESH NEHARE				
23	BUSHRA HAMID SHEIKH				
24	CHETNA MOHAN WANJARI				
25	DEVANSH SURESHRAO HIRUDKAR				
26	DHANASHRI SUDHAKAR NADEKAR				
27	DHANSHRI SHASHIKANT SOMKUWAR				
28	DISHA MANOJ KHEDKAR				
29	DIVYA RAJESH NASRE				
30	DIYA HIWARAJ KOCHE				
31	DOLLY RAVINDRA MALODE				
32	GAURAV GOPAL PALIWAL				
33	GAURAV SUDARSHAN CHOUDHARI				
34	GAURI SANJAY GHATE				
35	GAURI SURESH PATHADE				

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BBA Department
N.M.V. Katol

Prof. J. G. Alam

36	GIRISH MANOHAR NASRE				
37	GUNJAN GOPAL GURAV	G.G. Gurav	G.G. Gurav	G.G. Gurav	G.G. Gurav
38	GUNJAN RAJU KATLAM				
39	HARSH BABARAOJI KALE				
40	HARSH RAVINDRA NAGMOTE				
41	HIMANSHU YADAORAO NAIK				
42	ISHANVI SANJAY YEOLE				
43	ISHIKA MOTILAL KUMERIYE				
44	JANHVI RAJU WALKE				
45	JANVI SATISHJI DUBEY				
46	JAY GAJANANRAO DIGHEKAR				
47	JAY NARENDRA DAWARE				
48	JITESH RAMESHRAO CHARPE				
49	KAJAL ANIL BARAI				
50	KALYANI ANANDRAO POTDAR				
51	KALYANI MANOHAR DHOLE				
52	KARAN DIWAKAR GAJBHIYE				
53	KARAN RAJESH JAISWAL				
54	KARTIK AVINASH KENE				
55	KARTIK CHANDAN RATHOD				
56	KARTIK PRAKASH SARODE				
57	KAUSHIK RAJESH BERAD				
58	KHUSHI RAMESH CHAUDHARI				
59	KIRAN CHARANJI WASNIK				
60	KOMAL AKASH MASANE				
61	LOKESH RAJENDRA CHARDE				
62	MAHESHWARI NILKANTH NEHARE				
63	MAITHALI VILAS BHUJADE				
64	MANASWI SHRIRAM SATFALE				
65	MANISH BABARAO BHOYAR				
66	NEHA SUDHAKAR DAWARE				
67	NIKHIL SANJAYRAO CHOPADE				
68	NISHA RAJENDRA KAPSE				
69	PAWANKUMAR MAROTRAO DHOLE				
70	PAYAL SUNIL MURODIYA				
71	PIYUSH RAMESH WANJARI				
72	PORNIMA DADARAO KAVADKAR				
73	PRAFUL PRAVIN THENGNE				
74	PRAJWAL ASHOK MANKAR				
75	PRANOTI ASHOK CHOUDHARI				
76	PRATHAM PADMAKAR UKEY				
77	PRATIKSHA SHESHRAO BANGAR				
78	PREM MANOJ NASARE				
79	RACHANA RAJENDRA GAWANDE				
80	RITESH PADMAKAR GULDHE				
81	RITISHA MUNIRAJ DHAMDE				

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82	ROHAN RAMESHWAR DHAWAD				
83	ROSHANI DILIP MOHKAR				
84	RUCHITA RAJESH SOMKUWAR				
85	RUPESH SUBHASHRAO MADANKAR				
86	SAHIL RAJENDRA BADODE				
87	SAHIL RAVICHANDRA WAGHDHARE				
88	SALONI JANARDHAN HARANE				
89	SALONIS DIPAK GAIKWAD				
90	SAMIKSHA SANJAY GIRI				
91	SAMIKSHA SHAKULAL SURYAVANSHI				
92	SANKET RAMCHANDRA GAKHARE				
93	SANKET SHAMRAO TAYWADE				
94	SANSKRUTI SHRINIVAS MANDAOGADE				
95	SHABRI SANJAY KHAPRE				
96	SHRUTI LAXMANRAO KATARE				
97	SHRUTIKA DIWAKAR DHORE				
98	SIDDHI DNYANESHWAR BHONDE				
99	SNEHA RAVINDRA ZOTING				
100	SNEHAL KISNA MANEKAR				
101	SUHANI SANJAYRAO LADKE				
102	SUSHANT DEEPAK AMPARWAR				
103	SWATI RANJENDRA MOROLIYE				
104	TANVI MAROTRAO AMLE				
105	TINA RAVINDRA INGALE				
106	TRIVENI DHANRAJ THOMBARE				
107	UJAWAL ASHOK GADHAWE				
108	UJWALA YUVRAJ CHARDE				
109	VAIBHAV RAMAJI GHATODE				
110	VAISHNAVI ARVIND HINGAWE				
111	VAISHNAVI VISHNUJI PATANKAR				
112	VANSHRI SHESHRAO CHARDE				
113	VEDANT MANOHAR HELONDE				
114	VEEDHI VILAS ZADE				
115	VIDHI SURENDRARAO RAUT				
116	VRUSHABH BHIMRAOJI NILATKAR				
117	YASH ASHOKRAO DALVI				
118	YASH JAIPRAKASH RAUT				
119	YASH PRAKASH GHORMADE				
120	YASHASVI RAMESHRAO THAKARE				
	YOGISHRI SANJAY UIKEY				

MOD/Co-ordinator
BBA Department
[illegible]

Prof. J. G. [illegible]

Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) Second Semester (2023-24)

Subject – English-II

	Name of the Students	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT
1	ABHIJIT SURENDRA WAROKAR	20	17	18	18
2	ABHISHEK ASHOK SHIRODIYA	15	12	12	19
3	ADITYA NANDKISHOR GHUSE	12	14	16	17
4	AKANKSHA SANJAYRAO NASARE	13	13	19	16
5	AKSHAY JAYPAL CHANDEL	18	20	18	15
6	AKSHAY RAJENDRA FUTANE	20	16	10	14
7	ALFIYA JAMIL BODHAR	–	–	12	13
8	AMRUTA VINAYAK KAWADKAR	–	–	15	12
9	AMRUTA VINAYAK KAWADKAR	–	–	18	11
10	ANIKET BABLU THOSAR	15	20	17	10
11	ANUJ PURUSHOTTAM THAKARE	18	14	20	09
12	ANUJ SURENDRA SARODE	14	13	19	07
13	ANUSHKA ARUN UMATHE	11	16	15	
14	ANUSHKA KISHOR BIDKAR	15	18	14	08
15	ARYAN HEMRAJ KHAMBALKAR	10	19	12	14
16	AYUSH PURUSHOTTAM KALE	20	14	11	12
17	BHAKTI DASHRATH NANOTKAR	11	12	10	–
18	BHAVANA SUNIL MAHAJAN	16	11	08	–
19	BHUMI YUNESH DAWARE	14	18	20	–
20	BHUMIKA RAJARAM BONDRE	–	16	19	–
21	BHUMIKA RAJENDRA KALE	–	10	18	15
22	BHUSHAN RAJESH NEHARE	15	–	20	20
23	BUSHRA HAMID SHEIKH	19	–	15	16
24	CHETNA MOHAN WANJARI	18	15	13	18
25	DEVANSH SURESHRAO HIRUDKAR	17	20	18	14
26	DHANASHRI SUDHAKAR NADEKAR	11	14	20	15
27	DHANSHRI SHASHIKANT SOMKUWAR	09	19	14	13
28	DISHA MANOJ KHEDKAR	14	20	11	12
29	DIVYA RAJESH NASRE	15	18	13	11
30	DIYA HIWARAJ KOCHE	16	16	15	20
31	DOLLY RAVINDRA MALODE	11	09	12	14

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32	GAURAV GOPAL PALIWAL	11	14	18	20
33	GAURAV SUDARSHAN CHOUDHARI	12	15	20	19
34	GAURI SANJAY GHATE	15	17	19	16
35	GAURI SURESH PATHADE	14	16	16	15
36	GIRISH MANOHAR NASRE	-	-	15	14
37	GUNJAN GOPAL GURAV	-	15	14	18
38	GUNJAN RAJU KATLAM	18	18	12	16
39	HARSH BABARAOJI KALE	17	14	10	15
40	HARSH RAVINDRA NAGMOTE	16	13	12	-
41	HIMANSHU YADAORAO NAIK	15	12	20	-
42	ISHANVI SANJAY YEOLE	12	11	16	20
43	ISHIKA MOTILAL KUMERIYE	11	20	19	19
44	JANHVI RAJU WALKE	-	18	-	18
45	JANVI SATISHJI DUBEY	-	12	-	16
46	JAY GAJANANRAO DIGHEKAR	10	15	-	15
47	JAY NARENDRA DAWARE	14	13	-	14
48	JITESH RAMESHRAO CHARPE	12	11	15	12
49	KAJAL ANIL BARAI	16	20	14	10
50	KALYANI ANANDRAO POTDAR	10	14	13	18
51	KALYANI MANOHAR DHOLE	11	13	12	15
52	KARAN DIWAKAR GAJBHIYE	13	12	11	14
53	KARAN RAJESH JAISWAL	15	11	10	13
54	KARTIK AVINASH KENE	18	20	09	12
55	KARTIK CHANDAN RATHOD	17	19	11	-
56	KARTIK PRAKASH SARODE	16	16	20	-
57	KAUSHIK RAJESH BERAD	12	15	14	11
58	KHUSHI RAMESH CHAUDHARI	14	20	15	10
59	KIRAN CHARANJI WASNIK	11	-	16	15
60	KOMAL AKASH MASANE	20	-	18	18
61	LOKESH RAJENDRA CHARDE	18	13	20	17
62	MAHESHWARI NILKANTH NEHARE	19	11	14	16
63	MAITHALI VILAS BHUJADE	16	10	15	20
64	MANASWI SHRIRAM SATFALE	15	09	18	14
65	MANISH BABARAO BHOYAR	14	10	19	13
66	NEHA SUDHAKAR DAWARE	13	15	18	12
67	NIKHIL SANJAYRAO CHOPADE	12	13	17	11
68	NISHA RAJENDRA KAPSE	11	12	16	-
69	PAWANKUMAR MAROTRAO DHOLE	-	11	15	11
70	PAYAL SUNIL MURODIYA	-	10	14	10
71	PIYUSH RAMESH WANJARI	10	20	12	20
72	PORNIMA DADARAO KAVADKAR	09	14	11	15
73	PRAFUL PRAVIN THENGNE	12	15	13	16
74	PRAJWAL ASHOK MANKAR	13	16	-	19
75	PRANOTI ASHOK CHOUDHARI	11	17	-	11

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76	PRATHAM PADMAKAR UKEY	15	18	16	20
77	PRATIKSHA SHESHRAO BANGAR	14	16	14	14
78	PREM MANOJ NASARE	13	15	16	15
79	RACHANA RAJENDRA GAWANDE	20	18	16	18
80	RITESH PADMAKAR GULDHE	–	–	19	17
81	RITISHA MUNIRAJ DHAMDE	–	–	15	20
82	ROHAN RAMESHWAR DHAWAD	19	18	14	20
		–	–	12	16
83	ROSHANI DILIP MOHKAR	–	–	13	15
84	RUCHITA RAJESH SOMKUWAR	17	16	10	14
85	RUPESH SUBHASHRAO MADANKAR	16	12	11	12
86	SAHIL RAJENDRA BADODE	15	14	20	11
87	SAHIL RAVICHANDRA WAGHDHARE	14	13	18	20
88	SALONI JANARDHAN HARANE	14	12	16	15
89	SALONIS DIPAK GAIKWAD	–	14	14	16
90	SAMIKSHA SANJAY GIRI	15	09	12	18
91	SAMIKSHA SHAKULAL SURYAVANSHI	20	17	–	14
92	SANKET RAMCHANDRA GAKHARE	18	16	–	15
93	SANKET SHAMRAO TAYWADE	17	15	13	–
94	SANSKRUTI SHRINIVAS MANDAOGADE	16	14	12	20
95	SHABRI SANJAY KHAPRE	20	18	11	–
96	SHRUTI LAXMANRAO KATARE	15	13	–	–
97	SHRUTIKA DIWAKAR DHORE	13	11	10	15
98	SIDDHI DNYANESHWAR BHONDE	12	10	20	18
99	SNEHA RAVINDRA ZOTING	10	09	15	17
100	SNEHAL KISNA MANEKAR	14	12	16	15
101	SUHANI SANJAYRAO LADKE	20	18	18	12
102	SUSHANT DEEPAK AMPARWAR	19	16	19	14
103	SWATI RANJENDRA MOROLIYE	11	09	16	16
104	TANVI MAROTRAO AMLE	–	–	–	–
105	TINA RAVINDRA INGALE	10	09	14	–
106	TRIVENI DHANRAJ THOMBARE	15	13	15	20
107	UJAWAL ASHOK GADHAWE	14	12	13	19
108	UJWALA YUVRAJ CHARDE	13	11	12	18
109	VAIBHAV RAMAJI GHATODE	12	10	11	17
110	VAISHNAVI ARVIND HINGAWE	11	09	20	12

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BBA Department
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111	VAISHNAVI VISHNUJI PATANKAR	20	18	18	13
112	VANSHRI SHESHRAO CHARDE	15	14	15	15
113	VEDANT MANOHAR HELONDE	14	12	14	16
114	VEEDHI VILAS ZADE	13	11	12	18
115	VIDHI SURENDRARAO RAUT	12	10	11	-
116	VRUSHABH BHIMRAOJI NILATKAR	11	09	-	15
117	YASH ASHOKRAO DALVI	-	15	-	13
118	YASH JAIPRAKASH RAUT	-	18	10	-
119	YASH PRAKASH GHORMADE	10	-	05	-
120	YASHASVI RAMESHRAO THAKARE	09	19	20	16
	YOGISHRI SANJAY UIKEY	18	-	14	20

Prof. J. G. Alm

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) Second Semester (2023-24)

Subject – English-II

	Name of the Students	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT	ASSIGNMENT
1	ABHIJIT SURENDRA WAROKAR				
2	ABHISHEK ASHOK SHIRODIYA				
3	ADITYA NANDKISHOR GHUSE				
4	AKANKSHA SANJAYRAO NASARE				
5	AKSHAY JAYPAL CHANDEL				
6	AKSHAY RAJENDRA FUTANE				
7	ALFIYA JAMIL BODHAR				
8	AMRUTA VINAYAK KAWADKAR				
9	AMRUTA VINAYAK KAWADKAR				
10	ANIKET BABLU THOSAR				
11	ANUJ PURUSHOTTAM THAKARE				
12	ANUJ SURENDRA SARODE				
13	ANUSHKA ARUN UMATHE				
14	ANUSHKA KISHOR BIDKAR				
15	ARYAN HEMRAJ KHAMBALKAR				
16	AYUSH PURUSHOTTAM KALE				
17	BHAKTI DASHRATH NANOTKAR				
18	BHAVANA SUNIL MAHAJAN				
19	BHUMI YUNESH DAWARE				
20	BHUMIKA RAJARAM BONDRE				
21	BHUMIKA RAJENDRA KALE				
22	BHUSHAN RAJESH NEHARE				
23	BUSHRA HAMID SHEIKH				
24	CHETNA MOHAN WANJARI				
25	DEVANSH SURESHRAO HIRUDKAR				
26	DHANASHRI SUDHAKAR NADEKAR				
27	DHANSHRI SHASHIKANT SOMKUWAR				
28	DISHA MANOJ KHEDKAR				
29	DIVYA RAJESH NASRE				
30	DIYA HIWARAJ KOCHE				
31	DOLLY RAVINDRA MALODE				

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32	GAURAV GOPAL PALIWAL				
33	GAURAV SUDARSHAN CHOUDHARI				
34	GAURI SANJAY GHATE				
35	GAURI SURESH PATHADE				
36	GIRISH MANOHAR NASRE				
37	GUNJAN GOPAL GURAV				
38	GUNJAN RAJU KATLAM				
39	HARSH BABARAOJI KALE				
40	HARSH RAVINDRA NAGMOTE				
41	HIMANSHU YADAORAO NAIK				
42	ISHANVI SANJAY YEOLE				
43	ISHIKA MOTILAL KUMERIYE				
44	JANHVI RAJU WALKE				
45	JANVI SATISHJI DUBEY				
46	JAY GAJANANRAO DIGHEKAR				
47	JAY NARENDRA DAWARE				
48	JITESH RAMESHRAO CHARPE				
49	KAJAL ANIL BARAI				
50	KALYANI ANANDRAO POTDAR				
51	KALYANI MANOHAR DHOLE				
52	KARAN DIWAKAR GAJBHIYE				
53	KARAN RAJESH JAISWAL				
54	KARTIK AVINASH KENE				
55	KARTIK CHANDAN RATHOD				
56	KARTIK PRAKASH SARODE				
57	KAUSHIK RAJESH BERAD				
58	KHUSHI RAMESH CHAUDHARI				
59	KIRAN CHARANJI WASNIK				
60	KOMAL AKASH MASANE				
61	LOKESH RAJENDRA CHARDE				
62	MAHESHWARI NILKANTH NEHARE				
63	MAITHALI VILAS BHUJADE				
64	MANASWI SHRIRAM SATFALE				
65	MANISH BABARAO BHOYAR				
66	NEHA SUDHAKAR DAWARE				
67	NIKHIL SANJAYRAO CHOPADE				
68	NISHA RAJENDRA KAPSE				
69	PAWANKUMAR MAROTRAO DHOLE				
70	PAYAL SUNIL MURODIYA				
71	PIYUSH RAMESH WANJARI				
72	PORNIMA DADARAO KAVADKAR				
73	PRAFUL PRAVIN THENGNE				
74	PRAJWAL ASHOK MANKAR				
75	PRANOTI ASHOK CHOUDHARI				

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76	PRATHAM PADMAKAR UKEY				
77	PRATIKSHA SHESHRAO BANGAR	Bangar	Bngs	Bngs	Bngs
78	PREM MANOJ NASARE	P M Nasare	P. M. Nasar	P. M. Nasar	P. M. Nasar
79	RACHANA RAJENDRA GAWANDE	Rajwade	Rajwade	Rajwade	Rajwade
80	RITESH PADMAKAR GULDHE	Ritesh	Ritesh	Ritesh	Ritesh
81	RITISHA MUNIRAJ DHAMDE	Dhamde	Dhamde	Dhamde	Dhamde
82	ROHAN RAMESHWAR DHAWAD				
83	ROSHANI DILIP MOHKAR				
84	RUCHITA RAJESH SOMKUWAR	Rucha	Ruchita	Ruchita	Ruchita
85	RUPESH SUBHASHRAO MADANKAR				
86	SAHIL RAJENDRA BADODE				
87	SAHIL RAVICHANDRA WAGHDHARE	Sahil	Sahil	Sahil	Sahil
88	SALONI JANARDHAN HARANE				
89	SALONIS DIPAK GAIKWAD	Saloni	Saloni	Saloni	Saloni
90	SAMIKSHA SANJAY GIRI	Giri	Giri	Giri	Giri
91	SAMIKSHA SHAKULAL SURYAVANSHI				
92	SANKET RAMCHANDRA GAKHARE				
93	SANKET SHAMRAO TAYWADE				
94	SANSKRUTI SHRINIVAS MANDAOGADE				
95	SHABRI SANJAY KHAPRE	Shabri	Shabri	Shabri	Shabri
96	SHRUTI LAXMANRAO KATARE	S. L. Katare	S. L. Katare	S. L. Katare	S. L. Katare
97	SHRUTIKA DIWAKAR DHORE				
98	SIDDHI DNYANESHWAR BHONDE	Bhonde	Bhonde	Bhonde	Bhonde
99	SNEHA RAVINDRA ZOTING				
100	SNEHAL KISNA MANEKAR				
101	SUHANI SANJAYRAO LADKE				
102	SUSHANT DEEPAK AMPARWAR	Sushant	Sushant	Sushant	Sushant
103	SWATI RANJENDRA MOROLIYE				
104	TANVI MAROTRAO AMLE	Amle	Amle	Amle	Amle
105	TINA RAVINDRA INGALE				
106	TRIVENI DHANRAJ THOMBARE	Thombare	Thombare	Thombare	Thombare
107	UJAWAL ASHOK GADHAWE	U. A. Gadhawe	U. A. Gadhawe	U. A. Gadhawe	U. A. Gadhawe
108	UJWALA YUVRAJ CHARDE	Charde	Charde	Charde	Charde
109	VAIBHAV RAMAJI GHATODE				
110	VAISHNAVI ARVIND HINGAWE				

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111	VAISHNAVI VISHNUJI PATANKAR				
112	VANSHRI SHESHRAO CHARDE				
113	VEDANT MANOHAR HELONDE				
114	VEEDHI VILAS ZADE				
115	VIDHI SURENDRARAO RAUT				
116	VRUSHABH BHIMRAOJI NILATKAR				
117	YASH ASHOKRAO DALVI				
118	YASH JAIPRAKASH RAUT				
119	YASH PRAKASH GHORMADE				
120	YASHASVI RAMESHRAO THAKARE				
	YOGISHRI SANJAY UIKEY				

Prof. J. G. Alm

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Nabira Mahavidyalaya Katol

Bachelor of business administration semester III , session -2023-24

Subject- Managerial Economics

Sr.NO	Name of Students	Assignment	Assignment	Test	Test
1	AAKANSHA NARENDRA METANGALE	Aakanshu	Aakanshu		
2	ABHISHEK GAJANAN CHAUDHARI				
3	ADITYA RAJU KUMERIYA	Adi	Adi		
4	ANIS MURTUJA SHEIKH				
5	ANSHUL NANESHWAR ANWANE				
6	ARNAV SANDEEP KHADKOTKAR				
7	ARPITA JIWANDAS MAHANT				
8	ARPITA RAMGOPAL SONONE				
9	ASHIKA PUNAJI TUMDAM	A.P. Tumdam	A.P.Tumdam		
10	ATIF AYYAZ JIWANI				
11	AVANTIKA SUBHASH BHAKTE				
12	AVINASH SURESH MURODIYA				
13	CHANDRADIP RAMDAS EDKE				
14	CHETAN PRALHAD KHANDARE				
15	CHETAN SITARAM KATHANE	C.S.Kathane	C.S.Kathane		
16	CHIRAG MANOJ PANDE				

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BBA Department
N.M.V. Katol

Prof. J.G.Alme

17	DEVYANI KHEMRAJ GATHE				
18	DEVYANI BALWANTRAO WALKE				
19	DISHA SANJAY WANKHADE				
20	DIVYA SANJAY BALPANDE				
21	DURGESH GULAB BOBDE				
22	GAURAV BABAN NAGALE				
23	GAURAV R.WAGHMARE				
24	GAURI JAGDISH UKEY				
25	HARSHAL SANJAY POTE				
26	HIMANSHU BHASKAR SAWADH				
27	HINGLAJ SHANKAR BHANGE				
28	ISHA TANAJI KUTHE				
29	ISHANK GOPAL KHUTATE				
30	JANAVHI GAJANAN KADU				
31	JAYESH SUNIL DHANDE				
32	KARAN MUKESH ARORA				
33	KHUSHI SANJAY PATHE				
34	KIRAN PRAKASH KUMRE				
35	KRISHNA PRAVIN KADU				
36	KRUNAL DILIPRAO KALE				
37	KSHITIJ SUNIL BHANDWALKAR				
38	KULDIP DATTUJI BHADE				
39	KUNAL KISHOR PADOLIYA				

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BBA Department

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40	LALIT SANJAY NAVGHARE				
41	LINA DILIP BHASME	Lina.	Lina.		
42	LUKESH GANESH REWATKAR				
43	MARIA S.SYED	Maria *	Maria *		
44	MEGHA RAJENDRA GIRADKAR	M.R.Giradkar	M.R.Giradkar		
45	MISS. NEHA NARAYANRAO HAJARE	Hajare	Hajare		
46	MOHIT NAMDEV GHAGRE				
47	NAJUKA PRAMOD GHORMADE	Nej	Nejuka		
48	NASIBA ASGAR SHEIKH				
49	OMKAR DINKAR PATIL	Omkar..	Omkar..		
50	PIYUSH KISHOR JADHAV	Piyush..	Piyush..		
51	PIYUSH KESHAO JAULKAR				
52	PRAGATI DILIP GAWALI	Pgawali	Pgawali		
53	PRANALI SHANKAR RAUT	P.S.Raut	P.S.Raut		
54	PRANAY RUKHMANAND BHISEKAR	Pranay..	Pranay..		
	PRANAY FISKE				
55	PRATIK GANPAT YAMDE				
56	PRATIK ARJUNRAO CHARPE				
57	PRAVEEN A.WANJARI	Pwanjari	Pravin	1	
58	PREETI MOHAN DONGRE				
59	PUJA ARUN CHEDGE	Pchedge	Pchedge		
60	RAHUL ONKAR MATE				
61	RAJKUMAR MAROTRAO DHURVE				

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BBA Department

Prof. J. G. Alme

62	RAKESH DASHRATH KALAMBHE				
63	RITESH VINAYAK THAKRE				
64	RITESH CHHATRAPATI DHOPRE	Ritesh	Ritesh		
65	RITIK RAMBHAU REWATKAR				
66	ROHITKUMAR MADANLAL PRAJAPATI				
67	ROSHAN NAMDEO DEWASE				
68	RUCHIKA SUNIL THAWLE	Rthawle	Rthawle		
69	RUTUJA HARESHWARJI BASEWAR				
70	RUTVIK JAYRAM HINGVE				
71	SAGAR SHANKARRAO GAIKWAD				
72	SAHIL SANJAY MESHRAM				
73	SAKSHI DNYANESHWAR MANGAL	sakshi	sakshi		
74	SAKSHI BANDU DHAPKE	Dhapke	Dhapke		
75	SAKSHI OMKAR SOHALIYA				
76	SAMIKSHA GOUTAM KURVEKAR	Skurvekar	Skurvekar		
77	SANIYA VINOD DHOKE	S.V.Dhoke	S.V.Dhoke		
78	SAURABH SAHEBRAOJI BANNAGRE	S.S.Bannagre	S.S.Bannagre		
79	SHADAB RAMJAN SHEIKH	Shadab...	Shadab...		
80	SHAILI YOGRAJ CHORGHADE	Shaili	Shaili		
81	SHREYA PUNJAB DHAMDE				
82	SHUBHAM RAMGOPAL GUPTA	Sgupta	Sgupta		
83	SIMRAN SANJAY SATPUTE	Ssatpute	Ssatpute		
84	SWAPNIL RAJU DATIR				

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85	SWAROOP RAJESH MALVE				
86	TANUSHRI A.MURODIYE				
87	TARUN ANIL BEHNIYA				
88	TRUPTI PRAKASH YELKAR	T.P.Yelkar	T.P.Yelkar		
89	TUSHAR VILAS KUKADE				
90	VAISHNAVI SANJAY KENE				
91	VAISHNAVI SUDHAKAR BHAKTE				
92	VAISHNAVI PRALHAD DHAWAD				
93	VICKY RAVINDRA KAMBLE				
94	VIJAY HARISH PANCHBHAI				
95	VIVEK NARENDRASING BHADORIYA				
96	YASH LILADHAR GAYDHANE	Gaydhane	Gaydhane		

Prof. J. G. Alm

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BBA Department
N.M.V. Katol

Nabira Mahavidyalaya Katol

Bachelor of business administration semester IV th session -2023-24

Subject- Financial Wellbeing(FW)

Sr.NO	Name of Students	Unit TEST-	Unit TEST	Unit TEST	Unit TEST
1	AAKANSHA NARENDRA METANGALE	15	20	18	16
2	ABHISHEK GAJANAN CHAUDHARI	12	12	15	14
3	ADITYA RAJU KUMERIYA	13	14	13	–
4	ANIS MURTUJA SHEIKH	20	16	20	–
5	ANSHUL NANESHWAR ANWANE	14	18	12	11
6	ARNAV SANDEEP KHADKOTKAR	11	20	–	10
7	ARPITA JIWANDAS MAHANT	15	10	–	16
8	ARPITA RAMGOPAL SONONE	10	18	11	20
9	ASHIKA PUNAJI TUMDAM	13	17	12	15
10	ATIF AYYAZ JIWANI	17	10	16	13
11	AVANTIKA SUBHASH BHAKTE	16	–	17	10
12	AVINASH SURESH MURODIYA	–	14	20	11
13	CHANDRADIP RAMDAS EDKE	–	–	15	–
14	CHETAN PRALHAD KHANDARE	20	20	10	14
15	CHETAN SITARAM KATHANE	14	13	11	16
16	CHIRAG MANOJ PANDE	12	10	20	15

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17	DEVYANI KHEMRAJ GATHE	20	14	15	13
18	DEVYANI BALWANTRAO WALKE	19	–	14	19
19	DISHA SANJAY WANKHADE	16	–	20	17
20	DIVYA SANJAY BALPANDE	12	20	19	20
21	DURGESH GULAB BOBDE	14	14	17	18
22	GAURAV BABAN NAGALE	18	09	14	15
23	GAURAV R.WAGHMARE	17	08	–	14
24	GAURI JAGDISH UKEY	–	15	–	19
25	HARSHAL SANJAY POTE	–	14	11	18
26	HIMANSHU BHASKAR SAWADH	–	13	12	–
27	HINGLAJ SHANKAR BHANGE	–	10	14	–
28	ISHA TANAJI KUTHE	19	11	18	20
29	ISHANK GOPAL KHUTATE	16	19	16	19
30	JANAVHI GAJANAN KADU	11	18	15	18
31	JAYESH SUNIL DHANDE	14	16	13	15
32	KARAN MUKESH ARORA	15	12	12	12
33	KHUSHI SANJAY PATHE	20	–	10	14
34	KIRAN PRAKASH KUMRE	11	–	20	11
35	KRISHNA PRAVIN KADU	12	18	19	20
36	KRUNAL DILIPRAO KALE	14	19	18	19
37	KSHITIJ SUNIL BHANDWALKAR	18	21	–	14
38	KULDIP DATTUJI BHADE	16	18	17	12
39	KUNAL KISHOR PADOLIYA	19	15	15	15

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40	LALIT SANJAY NAVGHARE	15	20	15	18
41	LINA DILIP BHASME	19	12	18	17
42	LUKESH GANESH REWATKAR	18	15	16	–
43	MARIA S.SYED	–	14	20	–
44	MEGHA RAJENDRA GIRADKAR	–	13	15	–
45	MISS. NEHA NARAYANRAO HAJARE	14	11	19	20
46	MOHIT NAMDEV GHAGRE	12	10	11	11
47	NAJUKA PRAMOD GHORMADE	10	12	–	12
48	NASIBA ASGAR SHEIKH	20	14	20	15
49	OMKAR DINKAR PATIL	15	15	14	13
50	PIYUSH KISHOR JADHAV	17	17	18	09
51	PIYUSH KESHAO JAULKAR	16	–	17	18
52	PRAGATI DILIP GAWALI	–	18	–	16
53	PRANALI SHANKAR RAUT	–	20	18	12
54	PRANAY RUKHMANAND BHISEKAR	14	14	20	14
	PRANAY FISKE	12	–	19	11
55	PRATIK GANPAT YAMDE	19	18	10	12
56	PRATIK ARJUNRAO CHARPE	11	17	12	16
57	PRAVEEN A.WANJARI	20	12	–	20
58	PREETI MOHAN DONGRE	14	09	14	14
59	PUJA ARUN CHEDGE	13	14	12	13
60	RAHUL ONKAR MATE	18	–	11	11
61	RAJKUMAR MAROTRAO DHURVE	16	20	20	15

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62	RAKESH DASHRATH KALAMBHE	14	-	18	20
63	RITESH VINAYAK THAKRE	18	-	19	16
64	RITESH CHHATRAPATI DHOPRE	20	18	-	20
65	RITIK RAMBHAU REWATKAR	15	16	-	20
66	ROHITKUMAR MADANLAL PRAJAPATI	16	20	19	18
67	ROSHAN NAMDEO DEWASE	18	14	14	14
68	RUCHIKA SUNIL THAWLE	09	15	18	16
69	RUTUJA HARESHWARJI BASEWAR	-	18	17	18
70	RUTVIK JAYRAM HINGVE	-	10	12	-
71	SAGAR SHANKARRAO GAIKWAD	15	09	13	-
72	SAHIL SANJAY MESHRAM	12	18	11	11
73	SAKSHI DNYANESHWAR MANGAL	18	16	10	09
74	SAKSHI BANDU DHAPKE	09	14	20	20
75	SAKSHI OMKAR SOHALIYA	11	12	16	16
76	SAMIKSHA GOUTAM KURVEKAR	14	16	18	18
77	SANIYA VINOD DHOKE	18	-	-	12
78	SAURABH SAHEBRAOJI BANNAGRE	16	13	-	14
79	SHADAB RAMJAN SHEIKH	10	11	11	09
80	SHAILI YOGRAJ CHORGHADE	14	15	15	20
81	SHREYA PUNJAB DHAMDE	18	12	13	13
82	SHUBHAM RAMGOPAL GUPTA	19	10	12	12
83	SIMRAN SANJAY SATPUTE	16	-	10	11

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84	SWAPNIL RAJU DATIR	15	16	18	20
85	SWAROOP RAJESH MALVE	–	18	09	19
86	TANUSHRI A.MURODIYE	13	20	14	18
87	TARUN ANIL BEHNIYA	11	14	12	–
88	TRUPTI PRAKASH YELKAR	20	15	16	18
89	TUSHAR VILAS KUKADE	19	17	11	10
90	VAISHNAVI SANJAY KENE	–	–	10	14
91	VAISHNAVI SUDHAKAR BHAKTE	–	18	14	15
92	VAISHNAVI PRALHAD DHAWAD	14	–	15	18
93	VICKY RAVINDRA KAMBLE	16	–	16	09
94	VIJAY HARISH PANCHBHAI	13	19	18	16
95	VIVEK NARENDRASING BHADORIYA	11	18	12	20
96	YASH LILADHAR GAYDHANE	19	12	14	11

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Nabira Mahavidyalaya Katol

Bachelor of business administration semester IV th session -2024-25

Subject- Fundamentals of Marketing Management(FMM)

Sr.NO	Name of Students	Unit TEST-	Unit TEST	Unit TEST	Unit TEST
1	AAKANSHA NARENDRA METANGALE	19	18	09	18
2	ABHISHEK GAJANAN CHAUDHARI	18	17	12	15
3	ADITYA RAJU KUMERIYA	15	15	15	-
4	ANIS MURTUJA SHEIKH	13	16	16	-
5	ANSHUL NANESHWAR ANWANE	-	13	18	10
6	ARNAV SANDEEP KHADKOTKAR	-	15	19	16
7	ARPITA JIWANDAS MAHANT	14	11	20	20
8	ARPITA RAMGOPAL SONONE	11	-	15	14
9	ASHIKA PUNAJI TUMDAM	20	-	14	15
10	ATIF AYYAZ JIWANI	17	-	12	13
11	AVANTIKA SUBHASH BHAKTE	-	14	20	11
12	AVINASH SURESH MURODIYA	15	12	-	19
13	CHANDRADIP RAMDAS EDKE	14	10	-	10
14	CHETAN PRALHAD KHANDARE	19	09	-	14
15	CHETAN SITARAM KATHANE	17	18	11	15
16	CHIRAG MANOJ PANDE	16	07	09	-

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40	LALIT SANJAY NAVGHARE	18	14	20	17
41	LINA DILIP BHASME	07	20	16	12
42	LUKESH GANESH REWATKAR	16	15	15	18
43	MARIA S.SYED	15	18	14	15
44	MEGHA RAJENDRA GIRADKAR	-	-	13	14
45	MISS. NEHA NARAYANRAO HAJARE	-	-	12	13
46	MOHIT NAMDEV GHAGRE	17	20	18	-
47	NAJUKA PRAMOD GHORMADE	20	15	16	12
48	NASIBA ASGAR SHEIKH	16	14	20	18
49	OMKAR DINKAR PATIL	13	15	14	19
50	PIYUSH KISHOR JADHAV	15	18	12	15
51	PIYUSH KESHAO JAULKAR	18	17	09	14
52	PRAGATI DILIP GAWALI	19	16	18	11
53	PRANALI SHANKAR RAUT	15	12	-	20
54	PRANAY RUKHMANAND BHISEKAR	-	11	-	19
	PRANAY FISKE	-	09	14	16
55	PRATIK GANPAT YAMDE	14	10	19	10
56	PRATIK ARJUNRAO CHARPE	12	20	18	20
57	PRAVEEN A.WANJARI	20	-	17	15
58	PREETI MOHAN DONGRE	19	-	12	14
59	PUJA ARUN CHEDGE	16	15	-	12
60	RAHUL ONKAR MATE	11	14	15	19
61	RAJKUMAR MAROTRAO DHURVE	15	12	14	20

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84	SWAPNIL RAJU DATIR	–	20	19	16
85	SWAROOP RAJESH MALVE	20	20	18	15
86	TANUSHRI A.MURODIYE	15	14	16	12
87	TARUN ANIL BEHNIYA	16	13	18	15
88	TRUPTI PRAKASH YELKAR	18	15	20	16
89	TUSHAR VILAS KUKADE	19	20	15	11
90	VAISHNAVI SANJAY KENE	–	–	20	16
91	VAISHNAVI SUDHAKAR BHAKTE	–	–	12	20
92	VAISHNAVI PRALHAD DHAWAD	20	14	11	–
93	VICKY RAVINDRA KAMBLE	14	16	12	–
94	VIJAY HARISH PANCHBHAI	15	18	14	19
95	VIVEK NARENDRASING BHADORIYA	18	19	16	18
96	YASH LILADHAR GAYDHANE	12	15	20	16

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Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) Semester V, Semester (2023-24)

Max. marks – 25 Subject – IBE (Unit Test)

SR.NO	Name of Students	Test-I	Test-II	Test-III	Test-IV
1	ABHAY SANJAY SATPUTE	17	20	15	20
2	ABHISHEK RAMBHAU MESHRAM		16	18	10
3	ANKIT UTTAMRAO GONDANE	10		17	14
4	ANUSHKA DEVCHANDRA DAHALE	10	21		
5	ASMITA GANPATRAO GEDAM		20	17	13
6	BHAGYASHRI KISANAJI HIWARKAR	18	20	19	
7	BHAVESH RAJENDRA KALAMBHE	15	17	20	17
8	DHANSHRI SURESH TEKAM				
9	HARISH DHANRAJ WARTHI	10	15	15	12
10	KAJAL BHAGWAT KOLHE	—	17	15	10
11	KARAN SUNIL MOHARIYA	20	15	18	15
12	KHUSHALI GUNVANTA MAHORIYA		17	15	
13	KOMAL MANOHAR SONULKAR				20
14	LAVKESH MAHADEO GIRI	20	18	15	20
15	LOVE RAJESH DHOKE		15		18
16	LUKESH PURUSHOTTAM CHARDE	20		20	
17	MAHESH NARENDRA KOLHE	17	—	18	17
18	MANOJ RAMESH SAWARKAR		15	15	
19	MAST. VAIBHAV SURESHRAO CHOPADE	17	18	17	15
20	MUSKAN AYUB PATHAN	—	17	18	—
21	NAYAN DNYANESHWAR JIWATODE	20	20	15	20
22	NIKHIL RAMESHRAO SHIRPURKAR		15	16	
23	NISHA BABAN CHARDE	13	15	18	17

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BBA Department
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24	PAWAN RAVINDRA PATIL	15	20	13	17
25	PAWAN MANOJ HARJAL		12	—	20
26	PAYAL PRAMOD NEHARE	18	17	17	
27	PAYAL KISHOR MAKODE			17	15
28	POOJA MADAN BOBADE	13	13		
29	PRACHI PRAMOD NEHARE			17	10
30	PRAJWAL BHOJRAJ KALE	17	17		
31	PRAKRUTI KRUSHNAMURTI PATHAK			17	11
32	PRANALI NIRANJAN NASARE	11	14		
33	PRANALI GUNWANT DESHMUKH		20	17	10
34	PRANAY BANDUJI YEWALE	—	13	13	—
35	PRANJALI RAMESH CHOPDE	17	20	17	18
36	PRIYANKA RAVINDRARAO DONGARE		20		
37	RASIKA DINESHRAO KOLAMKAR	11	15	20	17
38	RITIK RUPCHAND RAMOD		13		
39	ROCHAK SHARAD KALE	17		15	20
40	ROHINI VILAS BHONGALE		12		
41	RUPESH RAMKRUSHNA RAUT	17		17	
42	SAHIL SURYAKANT GAIKWAD		17		20
42	SAHIL SURYAKANT GAIKWAD	10		21	
43	SAHIL GANESH WAGH		17		20
44	SAMIKSHA MAHADEVRAO SURJUSE	17		15	—
45	SAMMED ANIL PADOLE		17		
46	SHAHID AKBAR SHEIKH	20	—	0	20
47	SHIVANI MUKUNDRAO BHAKTE	17	15	17	
48	SHOAIB MEHABOOB SHEIKH	—	15	12	—
49	SOUMYAK SURENDRAKUMAR NAGDEVE		10	15	17
50	SWAPNIL NATTHU KHAIRKAR	15	—	15	18
51	TANUJA RAJESHRAO NASRE			20	21
52	TRUPTI SHESHRAOJI SAWDE	20	18	07	17

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BBA Department
M.S.M. Katol

Prof. D. G. Alone

Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) Semester V, Semester (2023-24)

Subject – ED (unit test)

Max-Marks - 25

SR.NO	Name of Students	Test-I	Test-II	Test-III	Test-IV
1	ABHAY SANJAY SATPUTE	18	20	15	17
2	ABHISHEK RAMBHAU MESHRAM	-	15		
3	ANKIT UTTAMRAO GONDANE	17		20	
4	ANUSHKA DEVCHANDRA DAHALE		15		
5	ASMITA GANPATRAO GEDAM	15	18	18	
6	BHAGYASHRI KISANAJI HIWARKAR	10			18
7	BHAVESH RAJENDRA KALAMBHE	10	17	17	
8	DHANSHRI SURESH TEKAM		15	20	
9	HARISH DHANRAJ WARTHI	20			
10	KAJAL BHAGWAT KOLHE		17	15	18
11	KARAN SUNIL MOHARIYA	17		-	15
12	KHUSHALI GUNVANTA MAHORIYA	20	18	-	
13	KOMAL MANOHAR SONULKAR			20	
14	LAVKESH MAHADEO GIRI	18	15	16	18
15	LOVE RAJESH DHOKE	20		-	
16	LUKESH PURUSHOTTAM CHARDE	18	15	20	
17	MAHESH NARENDRA KOLHE	-		-	18
18	MANOJ RAMESH SAWARKAR	-	18	-	17
19	MAST. VAIBHAV SURESHRAO CHOPADE	20	15	18	-
20	MUSKAN AYUB PATHAN	-	20	18	-
21	NAYAN DNYANESHWAR JIWATODE		17	-	17
22	NIKHIL RAMESHRAO SHIRPURKAR		15	20	18
23	NISHA BABAN CHARDE	20		21	-

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24	PAWAN RAVINDRA PATIL	17			
25	PAWAN MANOJ HARJAL	–	17	–	
26	PAYAL PRAMOD NEHARE		20	15	
27	PAYAL KISHOR MAKODE	17	20	10	
28	POOJA MADAN BOBADE				
29	PRACHI PRAMOD NEHARE	17	17	17	14
30	PRAJWAL BHOJRAJ KALE	15			
31	PRAKRUTI KRUSHNAMURTI PATHAK		18		
32	PRANALI NIRANJAN NASARE	15	15	17	20
33	PRANALI GUNWANT DESHMUKH				
34	PRANAY BANDUJI YEWALE	20	18	10	13
35	PRANJALI RAMESH CHOPDE		20		17
36	PRIYANKA RAVINDRARAO DONGARE	10		–	
37	RASIKA DINESHRAO KOLAMKAR		17		– 8
38	RITIK RUPCHAND RAMOD				
39	ROCHAK SHARAD KALE	20	18	17	8
40	ROHINI VILAS BHONGALE				
41	RUPESH RAMKRUSHNA RAUT	10	10	13	20
42	SAHIL SURYAKANT GAIKWAD	10	18	15	
42	SAHIL SURYAKANT GAIKWAD	17			
43	SAHIL GANESH WAGH		10	10	07
44	SAMIKSHA MAHADEVRAO SURUSE		18		
45	SAMMED ANIL PADOLE	20		10	11
46	SHAHID AKBAR SHEIKH		–		
47	SHIVANI MUKUNDRAO BHAKTE	10	17		12
48	SHOAIB MEHABOOB SHEIKH			17	
49	SOUMYAK SURENDRAKUMAR NAGDEVE	20	17	10	
50	SWAPNIL NATTHU KHAIRKAR	10		12	17
51	TANUJA RAJESHRAO NASRE	–		13	
52	TRUPTI SHESHRAOJI SAWDE	20	15	–	20

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Nabira Mahavidyalaya, Katol

Bachelor of Business Administration (B.B.A.) Semester VI Semester (2023-24) 2023-24

Subject – Financial Services Management

SR.NO	Name of Students	Assgn\Test	Assgn\Test	Assgn\Test	Assgn\Test
		Out of 25	Out of 25	Out of 25	Out of 25
1	ABHAY SANJAY SATPUTE	20	19	14	20
2	ABHISHEK RAMBHAU MESHRAM	15	17	18	-
3	ANKIT UTTAMRAO GONDANE	10	20	20	10
4	ANUSHKA DEVCHANDRA DAHALE	-	09	15	18
5	ASMITA GANPATRAO GEDAM	-	-	10	14
6	BHAGYASHRI KISANAJI HIWARKAR	10	-	08	11
7	BHAVESH RAJENDRA KALAMBHE	13	-	-	10
8	DHANSHRI SURESH TEKAM	15	14	14	15
9	HARISH DHANRAJ WARTHI	19	15	18	14
10	KAJAL BHAGWAT KOLHE	14	11	16	10
11	KARAN SUNIL MOHARIYA	10	10	12	18
12	KHUSHALI GUNVANTA MAHORIYA	11	08	11	-
13	KOMAL MANOHAR SONULKAR	-	15	18	17
14	LAVKESH MAHADEO GIRI	-	10	20	16
15	LOVE RAJESH DHOKE	-	-	11	14
16	LUKESH PURUSHOTTAM CHARDE	-	-	10	-
17	MAHESH NARENDRA KOLHE	19	20	-	15
18	MANOJ RAMESH SAWARKAR	11	16	06	11
19	MAST. VAIBHAV SURESHRAO CHOPADE	10	18	15	10
20	MUSKAN AYUB PATHAN	10	-	13	20
21	NAYAN DNYANESHWAR JIWATODE	12	15	12	19
22	NIKHIL RAMESHRAO SHIRPURKAR	15	14	09	10
23	NISHA BABAN CHARDE	13	10	19	09

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BBA Department
N.M.V. Katol

Prof. J. G. Alam

24	PAWAN RAVINDRA PATIL	19	10	20	16
25	PAWAN MANOJ HARJAL	18	09	–	12
26	PAYAL PRAMOD NEHARE	14	18	15	13
27	PAYAL KISHOR MAKODE	12	15	18	15
28	POOJA MADAN BOBADE	11	17	10	14
29	PRACHI PRAMOD NEHARE	16	10	09	12
30	PRAJWAL BHOJRAJ KALE	12	14	14	10
31	PRAKRUTI KRUSHNAMURTI PATHAK	15	10	18	09
32	PRANALI NIRANJAN NASARE	20	12	–	20
33	PRANALI GUNWANT DESHMUKH	–	14	–	15
34	PRANAY BANDUJI YEWALE	–	11	20	13
35	PRANJALI RAMESH CHOPDE	–	20	11	12
36	PRIYANKA RAVINDRARAO DONGARE	–	12	14	–
37	RASIKA DINESHRAO KOLAMKAR	20	–	16	–
38	RITIK RUPCHAND RAMOD	15	–	18	–
39	ROCHAK SHARAD KALE	20	11	16	–
40	ROHINI VILAS BHONGALE	14	14	10	15
41	RUPESH RAMKRUSHNA RAUT	13	16	12	20
42	SAHIL SURYAKANT GAIKWAD	12	18	15	14
42	SAHIL SURYAKANT GAIKWAD	09	20	12	13
43	SAHIL GANESH WAGH	11	–	14	11
44	SAMIKSHA MAHADEVRAO SURJUSE	16	–	13	09
45	SAMMED ANIL PADOLE	17	11	10	12
46	SHAHID AKBAR SHEIKH	20	14	20	14
47	SHIVANI MUKUNDRAO BHAKTE	12	15	15	13
48	SHOAIB MEHABOOB SHEIKH	15	20	10	11
49	SOUMYAK SURENDRAKUMAR NAGDEVE	14	10	20	10
50	SWAPNIL NATTHU KHAIRKAR	11	20	20	15
51	TANUJA RAJESHRAO NASRE	10	09	15	14
52	TRUPTI SHESHRAOJI SAWDE	19	08	14	13

Prof. J. G Ahmed.

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Name of Teacher – Dr. P.S. Rewatk

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24
TASK RECORD- TALLY

Sr. No.	Name of Student	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8
1	Abhijit Surendra Wanekar								
2	Abhishek Ashok Shirodiya								
3	Aditya Nandkishor Ghuse	A.N. Ghuse	A.N. Ghuse						
4	Akanksha Sanjayrao Nasare	Nasare	Nasare	Nasare	Nasare	Nasare	Nasare	Nasare	Nasare
5	Akshay Jaypal Chandel	Akshay	Akshay	Akshay	Akshay	Akshay	Akshay	Akshay	Akshay
6	Akshay Rajendra Futane	Futane	Futane	Futane	Futane	Futane	Futane	Futane	Futane
7	Alfiya Jamil Bodhar	Bodhar	Bodhar	Bodhar	Bodhar	Bodhar	Bodhar	Bodhar	Bodhar
8	Amruta Vinayak Kawadkar	Akwad	Akwad	Akwadk	Akwadk	Akwadk	Akwad	Akwadk	Akwadk
9	Aniket Bablu Thosar								
10	Anuj Purushottam Thakare	Anuj	Anuj						
11	Anuj Surendra Sarode								
12	Anushka Arun Umathe	Aumathe	Aumathe	Aumathe	Aumathe	Aumathe	Aumathe	Aumathe	Aumathe
13	Anushka Kishor Bidkar	AKBidkar	AKBidkar	AKBidkar	AKBidkar	AKBidkar	AKBidkar	AKBidkar	AKBidkar
14	Aryan Hemraj Khambaikar								
15	Ayush Purushottam Kale	Akale	Akale	Akale	Akale	Akale	Akale	Akale	Akale
16	Bhakti Dashrath Nanotkar	Bnanotkar	Bnanotkar	Bnanotkar	Bnanotkar	Bnanotkar	Bnanotkar	Bnanotkar	Bnanotkar
17	Bhavana Sunil Mahajan	B.S. Mahajan	B.S. Mahajan						
18	Bhumi Yunesh Daware								
19	Bhumika Rajaram Bondre	BRBondre	BRBondre	BRBondre	BRBondre	BRBondre	BRBondre	BRBondre	BRBondre
20	Bhumika Rajendra Kale	Bhumika R. Kale	Bhumika R. Kale	Bhumika Kale	Bhumika R. Kale	Bhumika Kale	Bhumika Kale	Bhumika Kale	Bhumika R. Kale

for Rewatk
HOD/Co-ordinator
BBA Department
N.M.V. Katol

Sr. No.	Name of Student	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8
21	Bhushan Rajesh Nehare								
22	Bushra Hamid Sheikh								
23	Chetna Mohan Wanjeri								
24	Devansh Sureshrao Hirudkar								
25	Dhanashri Sudhakar Nadekar								
26	Dhanshri Shashikant Somkuwar								
27	Disha Manoj Khedkar								
28	Divya Rajesh Nasre								
29	Diya Hiwaraj Koche								
30	Dolly Ravindra Malode								
31	Gaurav Gopal Paliwal								
32	Gaurav Sudarshan Choudhari								
33	Gauri Sanjay Ghate								
34	Gauri Suresh Pathade								
35	Girish Manohar Nasre								
36	Gunjan Gopal Gurav								
37	Gunjan Raju Katlam								
38	Harsh Babaraoji Kale								
39	Harsh Ravindra Nagmote								
40	Himanshu Yadaorao Naik								
41	Ishanvi Sanjay Yeole								
42	Ishika Motilal Kumeriye								
43	Janhvi Raju Walke								
44	Janvi Satishji Dubey								
45	Jay Gajananrao Dighekar								

for HOD/Co-ordinator
BBA Department
N.E.V. Katol

Sr. No.	Name of Student	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8
46	Jay Narendra Daware								
47	Jitesh Rameshrao Charpe								
48	Kajal Anil Barai								
49	Kalyani Anandrao Potdar	K. Potdar	K. Potdar	K. Potdar	K. Potdar	K. Potdar	K. Potdar	K. Potdar	K. Potdar
50	Kalyani Manohar Dhole								
51	Karan Diwakar Gajbhiye								
52	Karan Rajesh Jaiswal								
53	Kartik Avinash Kene								
54	Kartik Chandan Rathod								
55	Kartik Prakash Sarode								
56	Kaushik Rajesh Berad								
57	Khushi Ramesh Chaudhari								
58	Kiran Charanji Wasnik								
59	Komal Akash Masane								
60	Lokesh Rajendra Charde								
61	Maheshwari Nilkanth Nehare								
62	Maithali Vilas Bhujade								
63	Manaswi Shriram Satfale								
64	Manish Babarao Bhoyar								
65	Neha Sudhakar Daware								
66	Nikhil Sanjayrao Chopade								
67	Nisha Rajendra Kapse								
68	Pawankumar Marotrao Dhole								
69	Payal Sunil Murodiya								
70	Piyush Ramesh Wanjari								

for HOD/Co-ordinator
BBA Department
N.M.V. Katol

Sr. No.	Name of Student	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8
71	Pornima Dadarao Kavadkar								
72	Praful Pravin Thengne								
73	Prajwal Ashok Mankar								
74	Pranoti Ashok Choudhari								
75	Pratham Padmakar Ukey								
76	Pratiksha Sheshrao Banger								
77	Prem Manoj Nasare								
78	Rachana Rajendra Gawande								
79	Ritesh Padmakar Guldhe								
80	Ritisha Muniraj Dhamde								
81	Rohan Rameshwar Dhawad								
82	Roshani Dilip Mohkar								
83	Ruchita Rajesh Somkuwar								
84	Rupesh Subhashrao Madankar								
85	Sahil Rajendra Badode								
86	Sahil Ravichandra Waghdhare								
87	Saloni Janardhan Harane								
88	Salonis Dipak Gaikwad								
89	Samiksha Sanjay Giri								
90	Samiksha Shakulal Suryavanshi								
91	Sanket Ramchandra Gakhare								
92	Sanket Shamrao Taywade								
93	Sanskruti Shrinivas Mandaogade								
94	Shabri Sanjay Khapre								
95	Shruti Laxmanrao Katare								

for HOD/Co-ordinator
BBA Department
N.M.V. Katol

Sr. No.	Name of Student	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8
96	Shrutika Diwakar Dhore	Dhore	Dhore	Dhore	Dhore	Dhore	Dhore	Dhore	Dhore
97	Siddhi Dnyaneshwar Bhonde	Bahonale							
98	Sneha Ravindra Zoting	Sneharavindra	SRZoting						
99	Snehal Kisna Manekar	Manekar	Manekar	Manekar		Manekar	Manekar	Manekar	Manekar
100	Suhani Sanjayrao Ladke	Suhani	Suhani	Suhani					
101	Sushant Deepak Amparwar								
102	Swati Ranjendra Moroliye	S.R.Moroliye							
103	Tanvi Marotrao Amle	T.M. Amle	T.M. Amle	T.M.Amle	T.M.Amle	T.M.Amle	T.M. Amle	T.M.Amle	T.M.Amle
104	Tina Ravindra Ingale	Ingale	Ingale	Ingale	Ingale	Ingale	Ingale	Ingale	Ingale
105	Triveni Dhanraj Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare	Thombare
106	Ujawal Ashok Gadhawe	U.A.Gadhawe	U.A.Gadhawe						
107	Ujwala Yuvraj Charde	Acharde	Acharde	Acharde	Acharde	Acharde	Acharde	Acharde	Acharde
108	Vaibhav Ramaji Ghatode	Vaibhav	Vaibhav	Vaibhav	Vaibhav	Vaibhav	Vaibha	Vaibhav	Vaibhav
109	Vaishnavi Arvind Hingawe								
110	Vaishnavi Vishnuji Patankar	Patankar	Patankar						
111	Vanshri Sheshrao Charde	Vcharde	Vcharde	Vcharde	Vcharde	Vcharde	Vcharde	Vcharde	Vcharde
112	Vedant Manohar Helonde								
113	Veedhi Vilas Zade								
114	Vidhi Surendrarao Raut								
115	Vrushabh Bhimraoji Nilatkar								
116	Yash Ashokrao Dalvi	Y.A.Palvi	Y.A.Palvi						
117	Yash Jaiprakash Raut			Yraut	Yraut	Yraut	Yraut	Yraut	Yraut
118	Yash Prakash Ghormade								
119	Yashasvi Rameshrao Thakare	Thakare	Thakare						
120	Yogishri Sanjay Uikey	Yuikey	Yuikey						

MOD/Co-ordinator
BBA Department
N.M.V. Katol

Name of Teacher P.S. Rewatk

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24
ASSIGNMENT AND TEST RECORD (FM -I)

Sr. No.	Name of Student	ASSIGNMENT 1	ASSIGNMENT 2	ASSIGNMENT 3	ASSIGNMENT 4
1	ABHAY SANJAY SATPUTE	Satpute	Satpute	Satpute	
2	ABHISHEK RAMBHAU MESHRAM	—	—	—	
3	ANKIT UTTAMRAO GONDANE	Gondane	Gondane	Gondane	
4	ANUSHKA DEVCHANDRA DAHALE	—	—	—	
5	ASMITA GANPATRAO GEDAM	Gedam	Gedam	Gedam	
6	BHAGYASHRI KISANAJI HIWARKAR	B.K. Hiwarkar	B.K. Hiwarkar	B.K. Hiwarkar	
7	BHAVESH RAJENDRA KALAMBHE	—	—	—	
8	DHANSHRI SURESH TEKAM	D. Tekam	D. Tekam	D. Tekam	
9	HARISH DHANRAJ WARTHI	—	—	—	
10	KAJAL BHAGWAT KOLHE	KBKolhe	KBKolhe	KBKolhe	
11	KARAN SUNIL MOHARIYA	—	—	—	
12	KHUSHALI GUNVANTA MAHORIYA	Mahoriya	Mahoriya	Mahoriya	
13	KOMAL MANOHAR SONULKAR	KMSonulkar	KMSonulkar	KMSonulkar	
14	LAVKESH MAHADEO GIRI	—	—	—	
15	LOVE RAJESH DHOKE	—	—	—	
16	LUKESH PURUSHOTTAM CHARDE	—	—	—	
17	MAHESH NARENDRA KOLHE	—	—	—	
18	MANOJ RAMESH SAWARKAR	—	—	—	
19	MAST. VAIBHAV SURESHRAO CHOPADE	V. Chopade	V. Chopade	V. Chopade	
20	MUSKAN AYUB PATHAN	M. Pathan	M. Pathan	M. Pathan	
21	NAYAN DNYANESHWAR JIWATODE	Jiwatode	Jiwatode	Jiwatode	
22	NIKHIL RAMESHRAO SHIRPURKAR	—	—	—	
23	NISHA BABAN CHARDE	Charde	Charde	Charde	
24	PAWAN RAVINDRA PATIL	—	—	—	
25	PAWAN MANOJ HARJAL	—	—	—	
26	PAYAL PRAMOD NEHARE	Nehare	Nehare	Nehare	
27	PAYAL KISHOR MAKODE	Makode	Makode	Makode	
28	POOJA MADAN BOBADE	P.M. Bobade	P.M. Bobade	P.M. Bobade	
29	PRACHI PRAMOD NEHARE	Neha	Neha	Neha	
30	PRAJWAL BHOJRAJ KALE	—	—	—	
31	PRAKRUTI KRUSHNAMURTI PATHAK	—	—	—	
32	PRANALI NIRANJAN NASARE	Nasare	Nasare	Nasare	
33	PRANALI GUNWANT DESHMUKH	Deshmukh	Deshmukh	Deshmukh	
34	PRANAY BANDUJI YEWALE	Yewale	Yewale	Yewale	
35	PRANJALI RAMESH CHOPDE	Chopade	Chopade	Chopade	

Rewatk
for HOD/Co-ordinator
BBA Department

Sr. No.	Name of Student	ASSIGNMENT 1	ASSIGNMENT 2	ASSIGNMENT 3	ASSIGNMENT 4
36	PRIYANKA RAVINDRARAO DONGARE	PRongare	PRongare	PRongre	
37	RASIKA DINESHRAO KOLAMKAR	—	—	—	
38	RITIK RUPCHAND RAMOD	—	—	—	
39	ROCHAK SHARAD KALE	—	—	—	
40	ROHINI VILAS BHONGALE	R.V Bhongale	R.V Bhongale	R.V Bhongale	
41	RUPESH RAMKRUSHNA RAUT	—	—	—	
42	SAHIL SURYAKANT GAIKWAD	Sahil	Sahil	Sahil	
43	SAHIL GANESH WAGH	—	—	—	
44	SAMIKSHA MAHADEVRAO SURJUSE	S Surjuse	S Surjuse	S Surjuse	
45	SAMMED ANIL PADOLE	—	—	—	
46	SHAHID AKBAR SHEIKH	—	—	—	
47	SHIVANI MUKUNDRAO BHAKTE	—	—	—	
48	SHOAIB MEHABOOB SHEIKH	—	—	—	
49	SOUMYAK SURENDRAKUMAR NAGDEVE	s.s.Nagdeve	s.s.Nagdeve	s.s.Nagdeve	
50	SWAPNIL NATTHU KHAIRKAR	—	—	—	
51	TANUJA RAJESHRAO NASRE	[illegible]	[illegible]	[illegible]	
52	TRUPTI SHESHRAOJI SAWDE	[illegible]	[illegible]	[illegible]	

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Name of Teacher - P.S. Rawalk

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24
ASSIGNMENT (FINANCIAL ACCOUNTING USING TALLY)

Sr. No.	Name of Student	Assignment 1	Assignment 2	Assignment 3	Assignment 3
1	ABHIJIT SURENDRA WAROKAR				
2	ABHISHEK ASHOK SHIRODIYA				
3	ADITYA NANDKISHOR GHUSE	A.N. Ghuse			
4	AKANKSHA SANJAYRAO NASARE				
5	AKSHAY JAYPAL CHANDEL				
6	AKSHAY RAJENDRA FUTANE				
7	ALFIYA JAMIL BODHAR				
8	AMRUTA VINAYAK KAWADKAR				
9	ANIKET BABLU THOSAR				
10	ANUJ PURUSHOTTAM THAKARE				
11	ANUJ SURENDRA SARODE				
12	ANUSHKA ARUN UMATHE				
13	ANUSHKA KISHOR BIDKAR				
14	ARYAN HEMRAJ KHAMBALKAR				
15	AYUSH PURUSHOTTAM KALE				
16	BHAKTI DASHRATH NANOTKAR				
17	BHAVANA SUNIL MAHAJAN	B S Mahajan			
18	BHUMI YUNESH DAWARE				
19	BHUMIKA RAJARAM BONDRE				
20	BHUMIKA RAJENDRA KALE	Bhumika Kale			
21	BHUSHAN RAJESH NEHARE				
22	BUSHRA HAMID SHEIKH				
23	CHETNA MOHAN WANJARI				
24	DEVANSH SURESHRAO HIRUDKAR				
25	DHANASHRI SUDHAKAR NADEKAR				
26	DHANSHRI SHASHIKANT SOMKUWAR				
27	DISHA MANOJ KHEDKAR				
28	DIVYA RAJESH NASRE				
29	DIYA HIWARAJ KOCHE				
30	DOLLY RAVINDRA MALODE				

for HOD/Co-ordinator
BBA Department
N.M.V. Katol

31	GAURAV GOPAL PALIWAL				
32	GAURAV SUDARSHAN CHOUDHARI				
33	GAURI SANJAY GHATE				
34	GAURI SURESH PATHADE				
35	GIRISH MANOHAR NASRE				
36	GUNJAN GOPAL GURAV				
37	GUNJAN RAJU KATLAM				
38	HARSH BABARAOJI KALE				
39	HARSH RAVINDRA NAGMOTE				
40	HIMANSHU YADAORAO NAIK				
41	ISHANVI SANJAY YEOLE				
42	ISHIKA MOTILAL KUMERIYE				
43	JANHVI RAJU WALKE				
44	JANVI SATISHJI DUBEY				
45	JAY GAJANANRAO DIGHEKAR				
46	JAY NARENDRA DAWARE				
47	JITESH RAMESHRAO CHARPE				
48	KAJAL ANIL BARAI				
49	KALYANI ANANDRAO POTDAR				
50	KALYANI MANOHAR DHOLE				
51	KARAN DIWAKAR GAJBHIYE				
52	KARAN RAJESH JAISWAL				
53	KARTIK AVINASH KENE				
54	KARTIK CHANDAN RATHOD				
55	KARTIK PRAKASH SARODE				
56	KAUSHIK RAJESH BERAD				
57	KHUSHI RAMESH CHAUDHARI				
58	KIRAN CHARANJI WASNIK				
59	KOMAL AKASH MASANE				
60	LOKESH RAJENDRA CHARDE				
61	MAHESHWARI NILKANTH NEHARE				
62	MAITHALI VILAS BHUJADE				
63	MANASWI SHRIRAM SATFALE				
64	MANISH BABARAO BHOYAR				
65	NEHA SUDHAKAR DAWARE				
66	NIKHIL SANJAYRAO CHOPADE				

MODCS-ordinator
BBA Department
N.M.V. Katol

67	NISHA RAJENDRA KAPSE	Nkapse.			
68	PAWANKUMAR MAROTRAO DHOLE				
69	PAYAL SUNIL MURODIYA	Payal			
70	PIYUSH RAMESH WANJARI				
71	PORNIMA DADARAO KAVADKAR	PKawadkar			
72	PRAFUL PRAVIN THENGNE				
73	PRAJWAL ASHOK MANKAR				
74	PRANOTI ASHOK CHOUDHARI	Choudhari			
75	PRATHAM PADMAKAR UKEY				
76	PRATIKSHA SHESHRAO BANGAR	Bangar.			
77	PREM MANOJ NASARE	P.M. Nasare.			
78	RACHANA RAJENDRA GAWANDE	Gawande.			
79	RITESH PADMAKAR GULDHE	Ritesh			
80	RITISHA MUNIRAJ DHAMDE	Dhamde			
81	ROHAN RAMESHWAR DHAWAD	R.R.			
82	ROSHANI DILIP MOHKAR				
83	RUCHITA RAJESH SOMKUWAR				
84	RUPESH SUBHASHRAO NADANKAR				
85	SAHIL RAJENDRA BADODE				
86	SAHIL RAVICHANDRA WAGHDHARE	Sahil			
87	SALONI JANARDHAN HARANE	Sharane.			
88	SALONIS DIPAK GAIKWAD	Gaikwad			
89	SAMIKSHA SANJAY GIRI				
90	SAMIKSHA SHAKULAL SURYAVANSHI	Samikshas			
91	SANKET RAMCHANDRA GAKHARE				
92	SANKET SHAMRAO TAYWADE	Taywade			
93	SANSKRUTI SHRINIVAS MANDAOGAD				
94	SHABRI SANJAY KHAPRE	Shabri S. Khapre			
95	SHRUTI LAXMANRAO KATARE	S.L. Katare.			
96	SHRUTIKA DIWAKAR DHORE	Dhore.			
97	SIDDHI DNYANESHWAR BHONDE	Bhonde			
98	SNEHA RAVINDRA ZOTING	Sneha			
99	SNEHAL KISNA MANEKAR	Manekar.			
100	SUHANI SANJAYRAO LADKE	Suhani			
101	SUSHANT DEEPAK AMPARWAR				

HOD/Coordinator
BBA Department
B.M.V. Katol

102	SWATI RANJENDRA MORCLIYE				
103	TANVI MAROTRAO AMLE	Amle			
104	TINA RAVINDRA INGALE	Ingale			
105	TRIVENI DHANRAJ THOMBARE	Thombare			
106	UJAWAL ASHOK GADHAWE	U.A Gadhawe			
107	UJWALA YUVRAJ CHARDE	Chardo.			
108	VAIBHAV RANAJI GHATODE				
109	VAISHNAVI ARVIND HINGAWE				
110	VAISHNAVI VISHNUJI PATANKAR				
111	VANSHRI SHESHRAO CHARDE	V.Charde			
112	VEDANT MANOHAR HELONDE	Helonde			
113	VEEDHI VILAS ZADE				
114	VIDHI SURENDRARAO RAUT	Raut			
115	VRUSHABH BHIMRAOJI NILATKAR				
116	YASH ASHOKRAO DALVI				
117	YASH JAIPRAKASH RAUT	Yraut			
118	YASH PRAKASH GHORMADE				
119	YASHASVI RAMESHRAO THAKARE	Thakare			
120	YOGISHRI SANJAY UIKEY	Yuikey			

HOD/Coordinator
BBA Department
N.M.V. Katol

Name of teacher – P.S. Ranade

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA THIRD SEMESTER 2023-24
ADVANCE EXCEL

Sr. No.	Name of Student	Assignment 1	Assignment 2	Assignment 3	Assignment 4
1	AAKANSHA NARENDRA METANGALE	Aakansha	Aakansh	Aakansh	Aakansh
2	ABHISHEK GAJANAN CHAUDHARI				
3	ADITYA RAJU KUMERIYA				
4	ANIS MURTUJA SHEIKH				
5	ANSHUL NANESHWAR ANWANE	Anshul	Anshul	Anshul	—
6	ARNAV SANDEEP KHADKOTKAR				
7	ARPITA JIWANDAS MAHANT	Mahant			
8	ARPITA RAMGOPAL SONONE	A.R. Sonone	A.R.Sonone	A.R.Sonone	A.R.Sonone
9	ASHIKA PUNAJI TUMDAM	A.P.Tumdam	A.P.Tumdam	A.P.Tumdam	—
10	ATIF AYYAZ JIWANI				
11	AVANTIKA SUBHASH BHAKTE	Abhakte.	Abhakte.	Abhakte.	Abhakte.
12	AVINASH SURESH MURODIYA				
13	CHANDRADIP RAMDAS EDKE		—		—
14	CHETAN PRALHAD KHANDARE	CK	CK		
15	CHETAN SITARAM KATHANE	C.S.kathane	C.S.kathane	C.S.kathane	—
16	CHIRAG MANOJ PANDE	Pande	Pande	—	—
17	DEVYANI KHEMRAJ GATHE				
18	DEVYANI BALWANTRAO WALKE				
19	DISHA SANJAY WANKHADE	D.wankhade	D.wankhade	D.wankhade	D.wankhade
20	DIVYA SANJAY BALPANDE	Dsbelpande	Dsbelpande	Dsbelpande	D.S.Belpande
21	DURGESH GULAB BOBDE				
22	GAURAV BABAN NAGALE	GNagale	GNagale		
23	GAURAV RAJESH WAGHMARE				
24	GAURI JAGDISH UKEY	GUkey	GUkey		
25	HARSHAL SANJAY POTE	Hpote	Hpote	Hpote	
26	HIMANSHU BHASKAR SAWADH				
27	HINGLAJ SHANKAR BHANGE				
28	ISHA TANAJI KUTHE	I.T.kuthe	I.T.kuthe	I.T.kuthe	I.T.kuthe
29	ISHANK GOPAL KHUTATE	Ikhutate	Ikhutate	Ikhutate	Ikhutate
30	JANAVHI GAJANAN KADU	Jkadu	Jkadu	Jkadu	Jkadu
31	JAYESH SUNIL DHANDE	Jdhande	Jdhande	—	
32	KARAN MUKESH ARORA	Karora	Karora	Karora	

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Sr. No.	Name of Student	Assignment 1	Assignment 2	Assignment 3	Assignment 4
33	KHUSHI SANJAY PATHE				
34	KIRAN PRAKASH KUMRE				
35	KRISHNA PRAVIN KADU				
36	KRUNAL DILIPRAO KALE				
37	KSHITIJ SUNIL BHANDWALKAR				
38	KULDIP DATTUJI BHADE				
39	KUNAL KISHOR PADOLIYA				
40	LALIT SANJAY NAVGHARE				
41	LINA DILIP BHASME				
42	LUKESH GANESH REWATKAR				
43	MARIA SHARFUDDIN SYED				
44	MEGHA RAJENDRA GIRADKAR				
45	MISS. NEHA NARAYANRAO HAJARE				
46	MOHIT NAMDEV GHAGRE				
47	NAJUKA PRAMOD GHORMADE				
48	NASIBA ASGAR SHEIKH				
49	OMKAR DINKAR PATIL				
50	PIYUSH KISHOR JADHAV				
51	PIYUSH KESHAO JAULKAR				
52	PRAGATI DILIP GAWALI				
53	PRANALI SHANKAR RAUT				
54	PRANAY RUKHMANAND BHISEKAR				
55	PRATIK GANPAT YAMDE				
56	PRATIK ARJUNRAO CHARPE				
57	PRAVEEN ASHOK WANJARI				
58	PREETI MOHAN DONGRE				
59	PUJA ARUN CHEDGE				
60	RAHUL ONKAR MATE				
61	RAJKUMAR MAROTRAO DHURVE				
62	RAKESH DASHRATH KALAMBHE				
63	RITESH VINAYAK THAKRE				
64	RITESH CHHATRAPATI DHOPRE				
65	RITIK RAMBHAU REWATKAR				
66	ROHITKUMAR MADANLAL PRAJAPATI				
67	ROSHAN NAMDEO DEWASE				
68	RUCHIKA SUNIL THAWLE				
69	RUTUJA HARESHWARJI BASEWAR				

HOD/Co-ordinator
BBA Department
B.M.V. Katol

Sr. No.	Name of Student	Assignment 1	Assignment 2	Assignment 3	Assignment 4
70	RUTVIK JAYRAM HINGVE				
71	SAGAR SHANKARRAO GAIKWAD				
72	SAHIL SANJAY MESHRAM				
73	SAKSHI DNYANESHWAR MANGAL				
74	SAKSHI BANDU DHAPKE				
75	SAKSHI OMKAR SOHALIYA				
76	SAMIKSHA GOUTAM KURVEKAR				
77	SANIYA VINOD DHOKE				
78	SAURABH SAHEBRAOJI BANNAGRE				
79	SHADAB RAMJAN SHEIKH				
80	SHAILI YOGRAJ CHORGHADE				
81	SHREYA PUNJAB DHAMDE				
82	SHUBHAM RAMGOPAL GUPTA				
83	SIMRAN SANJAY SATPUTE				
84	SWAPNIL RAJU DATIR				
85	SWAROOP RAJESH MALVE				
86	TANUSHRI ASHOK MURODIYE				
87	TARUN ANIL BEHNIYA				
88	TRUPTI PRAKASH YELKAR				
89	TUSHAR VILAS KUKADE				
90	VAISHNAVI SANJAY KENE				
91	VAISHNAVI SUDHAKAR BHAKTE				
92	VAISHNAVI PRALHAD DHAWAD				
93	VICKY RAVINDRA KAMBLE				
94	VIJAY HARISH PANCHBHAI				
95	VIVEK NARENDRASING BHADORIYA				
96	YASH LILADHAR GAYDHANE				

97 Kautika Sakaniya

HOD/Co-ordinator
BBA Department
M.M.V. Katol

Name of Teacher- Dr. P.S. Revalli

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FOURTH SEMESTER 2023-24

FM

Sr. No.	Name of Student	Assignment 1	Assignment 2	Assignment 3	Assignment 4
1	AAKANSHA NARENDRA METANGALE	A. Metangal	A. Metangal	A. Metangale	
2	ABHISHEK GAJANAN CHAUDHARI				
3	ADITYA RAJU KUMERIYA				
4	ANIS MURTUJA SHEIKH				
5	ANSHUL NANESHWAR ANWANE	Anwane	Anwane	Anwane	
6	ARNAV SANDEEP KHADKOTKAR				
7	ARPITA JIWANDAS MAHANT				
8	ARPITA RAMGOPAL SONONE	A. R. Sonone	A.R. Sonone	A. R. Sonone	
9	ASHIKA PUNAJI TUMDAM	A. Tumdam	A. Tumdam	A. Tumdam	
10	ATIF AYYAZ JIWANI	Atif wani	Atifwani	Atifwani	
11	AVANTIKA SUBHASH BHAKTE				
12	AVINASH SURESH MURODIYA				
13	CHANDRADIP RAMDAS EDKE				
14	CHETAN PRALHAD KHANDARE				
15	CHETAN SITARAM KATHANE				
16	CHIRAG MANOJ PANDE				
17	DEVYANI KHEMRAJ GATHE				
18	DEVYANI BALWANTRAO WALKE	D.B. Walke	D.B. Walke	D.B. Walke	
19	DISHA SANJAY WANKHADE	D. Wankhade	D. Wankhade	D. Wankhade	
20	DIVYA SANJAY BALPANDE	D S Balpande	D S Balpande	D.S. Balpande	
21	DURGESH GULAB BOBDE				
22	GAURAV BABAN NAGALE				
23	GAURAV RAJESH WAGHMARE				
24	GAURI JAGDISH UKEY				
25	HARSHAL SANJAY POTE				
26	HIMANSHU BHASKAR SAWADH				
27	HINGLAJ SHANKAR BHANGE				
28	ISHA TANAJI KUTHE	I.T. Kuthe	I.T. Kuthe	I.T. Kuthe	
29	ISHANK GOPAL KHUTATE				
30	JANAVHI GAJANAN KADU				
31	JAYESH SUNIL DHANDE				
32	KARAN MUKESH ARORA				
33	KHUSHI SANJAY PATHE				
34	KIRAN PRAKASH KUMRE				
35	KRISHNA PRAVIN KADU				
36	KRUNAL DILIPRAO KALE				

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N.M.V. Katol

37	KSHITIJ SUNIL BHANDWALKAR				
38	KULDIP DATTUJI BHADE				
39	KUNAL KISHOR PADOLIYA				
40	LALIT SANJAY NAVGHARE				
41	LINA DILIP BHASME				
42	LUKESH GANESH REWATKAR				
43	MARIA SHARFUDDIN SYED				
44	MEGHA RAJENDRA GIRADKAR	M.R. Giradkar	M.R. Giradkar	M.R. Giradkar	
45	MISS. NEHA NARAYANRAO HAJARE				
46	MOHIT NAMDEV GHAGRE				
47	NAJUKA PRAMOD GHORMADE				
48	NASIBA ASGAR SHEIKH				
49	OMKAR DINKAR PATIL				
50	PIYUSH KISHOR JADHAV				
51	PIYUSH KESHAO JAULKAR				
52	PRAGATI DILIP GAWALI				
53	PRANALI SHANKAR RAUT	P.S. Raut	P.S. Raut	P.S. Raut	
54	PRANAY RUKHMANAND BHISEKAR				
55	PRATIK GANPAT YAMDE				
56	PRATIK ARJUNRAO CHARPE				
57	PRAVEEN ASHOK WANJARI				
58	PREETI MOHAN DONGRE				
59	PUJA ARUN CHEDGE				
60	RAHUL ONKAR MATE				
61	RAJKUMAR MAROTRAO DHURVE				
62	RAKESH DASHRATH KALAMBHE	R.D. Kalambhe	R.D. Kalambhe	R.D. Kalambhe	
63	RITESH VINAYAK THAKRE				
64	RITESH CHHATRAPATI DHOPRE				
65	RITIK RAMBHAU REWATKAR	R. Rewas			
66	ROHITKUMAR MADANLAL PRAJAPATI				
67	ROSHAN NAMDEO DEWASE				
68	RUCHIKA SUNIL THAWLE				
69	RUTUJA HARESHWARJI BASEWAR				
70	RUTVIK JAYRAM HINGVE				
71	SAGAR SHANKARRAO GAIKWAD				
72	SAHIL SANJAY MESHRAM				
73	SAKSHI DNYANESHWAR MANGAL	Dmangal	Dmangal	Dmangal	
74	SAKSHI BANDU DHAPKE	Dhapke	Dhapke	Dhapke	
75	SAKSHI OMKAR SOHALIYA				
76	SAMIKSHA GOUTAM KURVEKAR				
77	SANIYA VINOD DHOKE	S.V. Dhoke	S.V. Dhoke	S.V. Dhoke	

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B.M.V. Katol

78	SAURABH SAHEBRAOJI BANNAGRE	S.S.Bannagre	S.S.Bannagre	S.B.Bann	
79	SHADAB RAMJAN SHEIKH				
80	SHAILI YOGRAJ CHORGHADE				
81	SHREYA PUNJAB DHAMDE				
82	SHUBHAM RAMGOPAL GUPTA				
83	SIMRAN SANJAY SATPUTE	S.Satpute	S.Satpute	S.Satpute	
84	SWAPNIL RAJU DATIR				
85	SWAROOP RAJESH MALVE				
86	TANUSHRI ASHOK MURODIYE	Amit	Amit	Amit	
87	TARUN ANIL BEHNIYA				
88	TRUPTI PRAKASH YELKAR	T. Yelkar	T. Yelkar.	T. Yelkar.	
89	TUSHAR VILAS KUKADE				
90	VAISHNAVI SANJAY KENE				
91	VAISHNAVI SUDHAKAR BHAKTE	V.Bhakte	V.Bhakte	V.Bhakte	
92	VAISHNAVI PRALHAD DHAWAD				
93	VICKY RAVINDRA KAMBLE				
94	VIJAY HARISH PANCHBHAI				
95	VIVEK NARENDRASING BHADORIYA				
96	YASH LILADHAR GAYDHANE	Gaydhane	Gaydhane	Gaydhane	

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BSA Department
B.E.V. Ketol

Name of Teacher – P.S. Rawalk

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24
ASSIGNMENT / TEST (SUBJECT - Foundation of Managerial effectiveness)

Sr. No.	Name of Student	Assigment	Test	Ass-2	T-2	Ass-3	T-3	Ass-4	T-4
1	Abhijit Surendra Warokar		06		05				
2	Abhishek Ashok Shirodiya				04				
3	Aditya Nandkishor Ghuse				04				
4	Akanksha Sanjayrao Nasare		05						
5	Akshay Jaypal Chandel								
6	Akshay Rajendra Futane		04		04				
7	Alfiya Jamil Bodhar								
8	Amruta Vinayak Kawadkar		06		08				
9	Aniket Bablu Thosar								
10	Anuj Purushottam Thakare		05						
11	Anuj Surendra Sarode		01						
12	Anushka Arun Umathe		07		08				
13	Anushka Kishor Bidkar		07		08				
14	Aryan Hemraj Khambalkar		02		06				
15	Ayush Purushottam Kale								
16	Bhakti Dashrath Nanotkar								
17	Bhavana Sunil Mahajan		04						
18	Bhumi Yunesh Daware								
19	Bhumika Rajaram Bondre		08		08				
20	Bhumika Rajendra Kale		08						
21	Bhushan Rajesh Nehare				06				
22	Bushra Hamid Sheikh		05		08				
23	Chetna Mohan Wanjari		08		08				
24	Devansh Sureshrao Hirudkar								
25	Dhanashri Sudhakar Nadekar				07				
26	Dhanshri Shashikant Somkuwar		04		06				
27	Disha Manoj Khedkar		05		08				
28	Divya Rajesh Nasre		08		08				
29	Diya Hiwaraj Koche		07		08				
30	Dolly Ravindra Malode		04						
31	Gaurav Gopal Paliwal				04				
32	Gaurav Sudarshan Choudhari		02						
33	Gauri Sanjay Ghate				08				
34	Gauri Suresh Pathade		05						
35	Girish Manohar Nasre								
36	Gunjan Gopal Gurav		04						
37	Gunjan Raju Katlam		04		03				

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N.M.V. Katol

38	Harsh Babaraoji Kale								
39	Harsh Ravindra Nagmote								
40	Himanshu Yadaorao Naik								
41	Ishanvi Sanjay Yeole								
42	Ishika Motilal Kumeriye	Kumeriye	05	Kumeriye		Kumeriye			
43	Janhvi Raju Walke		05		06				
44	Janvi Satishji Dubey	Dubey	04	Dubey	08	Dubey			
45	Jay Gajananrao Dighekar	Dighekar	04	Dighekar		Dighekar			
46	Jay Narendra Daware		05		08				
47	Jitesh Rameshrao Charpe		03		04				
48	Kajal Anil Barai								
49	Kalyani Anandrao Potdar	K. Potdar		K. Potdar	08	K. Potdar			
50	Kalyani Manohar Dhole	Dhole		Dhole		Dhole			
51	Karan Diwakar Gajbhiye		08		04				
52	Karan Rajesh Jaiswal		03						
53	Kartik Avinash Keno	Kartik Keno	05	Kartik Keno		Kartik Keno			
54	Kartik Chandan Rathod	Rathod	05	Rathod	07	Rathod			
55	Kartik Prakash Sarode		07		04				
56	Kaushik Rajesh Berad		06		04				
57	Khushi Ramesh Chaudhari	Chaudhari	05	Chaudhari	8	Chaudhari			
58	Kiran Charanji Wasnik		05		6				
59	Komal Akash Masane		07						
60	Lokesh Rajendra Charde	Charde		Charde		Charde			
61	Maheshwari Nilkanth Nehare	MNehare	04	MNehare	8	MNehare			
62	Maithali Vilas Bhujade	MBhujade		MBhujade		MBhujade			
63	Manaswi Shriram Satfale		07						
64	Manish Babarao Bhoyar		02		03				
65	Neha Sudhakar Daware		07						
66	Nikhil Sanjayrao Chopade		07		8				
67	Nisha Rajendra Kapse	NKapse		NKapse	06	NKapse			
68	Pawankumar Marotrao Dhole				04				
69	Payal Sunil Murodiya		04		07				
70	Piyush Ramesh Wanjari								
71	Pornima Dadarao Kavadkar	P. Kavadkar	06	P. Kavadkar	08	P. Kavadkar			
72	Praful Pravin Thengne								
73	Prajwal Ashok Mankar		02		03				
74	Pranoti Ashok Choudhari	Choudhari		Choudhari		Choudhari			
75	Pratham Padmakar Ukey								
76	Pratiksha Sheshrao Bangar	Bangar	06	Bangar		Bangar			
77	Prem Manoj Nasare	P.M. Nasare	06	P.M. Nasare	05	P.M. Nasare			
78	Rachana Rajendra Gawande		05		02				
79	Ritesh Padmakar Guldhe		04						

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M.M.V. Katol

	Ritisha Muniraj Dhamde	Dhamde		Dhamde		Dhamde			
81	Rohan Rameshwar Dhawad	R.R.	03	R.R.		R.R.			
82	Roshani Dilip Mohkar		03						
83	Ruchita Rajesh Somkuwar	Somkuwar	04	Somkuwar	08	Somkuwar			
84	Rupesh Subhashrao Madankar								
85	Sahil Rajendra Badode		06						
86	Sahil Ravichandra Waghdhare		05		08				
87	Saloni Janardhan Harane								
88	Salonis Dipak Gaikwad		04		06				
89	Samiksha Sanjay Giri		08						
90	Samiksha S. Suryavanshi	Samiksha	08	Samiksha		Samiksha			
91	Sanket Ramchandra Gakhare								
92	Sanket Shamrao Taywade	Taywade	07	Taywade	08	Taywade			
93	Sanskruti Shrinivas Mandaogad		05		06				
94	Shabri Sanjay Khapre	Shabri Khapre	07	Shabri Khapre		Shabri Khapre			
95	Shruti Laxmanrao Katare	S.L. Katare	06	S.L. Katare		S.L. Katare			
96	Shrutika Diwakar Dhore	Dhore	04	Dhore	08	Dhore			
97	Siddhi Dnyaneshwar Bhonde	Bhonde	05	Bhonde	08	Bhonde			
98	Sneha Ravindra Zoting		04		03				
99	Snehal Kisna Manekar	Manekar		Manekar	04	Manekar			
100	Suhani Sanjayrao Ladke	Suhani	06	Suhani	08	Suhani			
101	Sushant Deepak Amparwar								
102	Swati Ranjendra Moroliye	S.R. Moroliye		S.R. Moroliye	04	S.R. Moroliye			
103	Tanvi Marotrao Amle	T.M. Amle	05	T.M. Amle	08	T.M. Amle			
104	Tina Ravindra Ingale	Ingale		Ingale		Ingale			
105	Triveni Dhanraj Thombare	Thombare	08	Thombare	08	Thombare			
106	Ujawal Ashok Gadhawe		05						
107	Ujwala Yuvraj Charde								
108	Vaibhav Ramaji Ghatode	Vaibhav	02	Vaibhav	08	Vaibhav			
109	Vaishnavi Arvind Hingawe								
110	Vaishnavi Vishnuji Patankar	Patankar	05	Patankar		Patankar			
111	Vanshri Sheshrao Charde	Vchaode	04	Vchaode	04	Vchaode			
112	Vedant Manohar Helonde		03		03				
113	Veedhi Vilas Zade		04		04				
114	Vidhi Surendrarao Raut		05		07				
115	Vrushabh Bhimraoji Nilatkar		00						
116	Yash Ashokrao Dalvi		9		03				
117	Yash Jaiprakash Raut	Raut	04	Raut	05	Raut			
118	Yash Prakash Ghormade	Yash		Yash		Yash			
119	Yashasvi R. Thakare		06		08				
120	Yogishri Sanjay Uikey		08						

Co-ordinator
BR- Senior
M.V. Kazi

Name of Teacher. P.S. Revatkar

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA SECOND SEMESTER 2023-24

ASSIGNMENT / TEST (SUBJECT -

Sr. No.	Name of Student	Unit I		Unit II		Unit III		Unit IV	
1	Abhijit Surendra Warokar		07		08		08		07
2	Abhishek Ashok Shirodiya		06		08		08		07
3	Aditya Nandkishor Ghuse			—				—	
4	Akanksha Sanjayrao Nasare								
5	Akshay Jaypal Chandel								
6	Akshay Rajendra Futane		08		08		07		08
7	Alfiya Jamil Bodhar	—				—			
8	Amruta Vinayak Kawadkar								
9	Aniket Bablu Thosar								
10	Anuj Purushottam Thakare			—				—	
11	Anuj Surendra Sarode		06	—				—	
12	Anushka Arun Umathe								
13	Anushka Kishor Bidkar								
14	Aryan Hemraj Khambalkar		07		08		06		07
15	Ayush Purushottam Kale	—				—			
16	Bhakti Dashrath Nanotkar								
17	Bhavana Sunil Mahajan								
18	Bhumi Yunesh Daware								
19	Bhumika Rajaram Bondre								
20	Bhumika Rajendra Kale								
21	Bhushan Rajesh Nehare								
22	Bushra Hamid Sheikh								
23	Chetna Mohan Wanjari							—	
24	Devansh Sureshrao Hirudkar								
25	Dhanashri Sudhakar Nadekar								
26	Dhanshri Shashikant Somkuwar								
27	Disha Manoj Khedkar								
28	Divya Rajesh Nasre								
29	Diya Hiwaraj Koche								
30	Dolly Ravindra Malode								
31	Gaurav Gopal Paliwal								
32	Gaurav Sudarshan Choudhari							—	
33	Gauri Sanjay Ghate							—	
34	Gauri Suresh Pathade								
35	Girish Manohar Nasre								
36	Gunjan Gopal Gurav								
37	Gunjan Raju Katlam								

BBA Department
N.M.V. Katol

	Harsh Babaraoji Kale								
	Harsh Ravindra Nagmote								
40	Himanshu Yadaorao Naik								
41	Ishanvi Sanjay Yeole								
42	Ishika Motilal Kumeriye								
43	Janhvi Raju Walke								
44	Janvi Satishji Dubey								
45	Jay Gajananrao Dighekar								
46	Jay Narendra Daware								
47	Jitesh Rameshrao Charpe								
48	Kajal Anil Barai								
49	Kalyani Anandrao Potdar								
50	Kalyani Manohar Dhole								
51	Karan Diwakar Gajbhiye								
52	Karan Rajesh Jaiswal								
53	Kartik Avinash Kene								
54	Kartik Chandan Rathod								
55	Kartik Prakash Sarode								
56	Kaushik Rajesh Berad								
57	Khushi Ramesh Chaudhari								
58	Kiran Charanji Wasnik								
59	Komal Akash Masane								
60	Lokesh Rajendra Charde								
61	Maheshwari Nilkanth Nehare								
62	Maithali Vilas Bhujade								
63	Manaswi Shriram Satfale								
64	Manish Babarao Bhoyar								
65	Neha Sudhakar Daware								
66	Nikhil Sanjayrao Chopade								
67	Nisha Rajendra Kapse								
68	Pawankumar Marotrao Dhole								
69	Payal Sunil Murodiya								
70	Piyush Ramesh Wanjari								
71	Ponnima Dadarao Kavadkar								
72	Praful Pravin Thengne								
73	Prajwal Ashok Mankar								
74	Pranoti Ashok Choudhari								
75	Pratham Padmakar Ukey								
76	Pratiksha Shoshrao Bangar								
77	Prem Manoj Nasare								
78	Rachana Rajendra Gawande								
79	Ritesh Padmakar Guldhe								

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BBA Department
N.M.V. Katol

	Ritisha Muniraj Dhamde									
81	Rohan Rameshwar Dhawad									
82	Roshani Dilip Mohkar									
83	Ruchita Rajesh Somkuwar									
84	Rupesh Subhashrao Madankar									
85	Sahil Rajendra Badode									
86	Sahil Ravichandra Waghdhare									
87	Saloni Janardhan Harane									
88	Salonis Dipak Gaikwad									
89	Samiksha Sanjay Giri									
90	Samiksha S. Suryavanshi									
91	Sanket Ramchandra Gakhare									
92	Sanket Shamrao Taywade									
	Sanskruti Shrinivas Mandaogad									
94	Shabri Sanjay Khapre									
95	Shruti Laxmanrao Katare									
96	Shrutika Diwakar Dhore									
97	Siddhi Dnyaneshwar Bhonde									
98	Sneha Ravindra Zoting									
99	Snehal Kisna Manekar									
100	Suhani Sanjayrao Ladke									
101	Sushant Deepak Amparwar									
102	Swati Ranjendra Moroliye									
103	Tanvi Marotrao Amle									
104	Tina Ravindra Ingale									
105	Triveni Dhanraj Thombare									
106	Ujawal Ashok Gadhawe									
107	Ujwala Yuvraj Charde									
108	Vaibhav Ramaji Ghatode									
109	Vaishnavi Arvind Hingawe									
110	Vaishnavi Vishnuji Patankar									
111	Vanshri Sheshrao Charde									
112	Vedant Manohar Helonde									
113	Veedhi Vilas Zade									
114	Vidhi Surendrarao Raut									
115	Vrushabh Bhimraoji Nilatkar		7		7		7		7	
116	Yash Ashokrao Dalvi									
117	Yash Jaiprakash Raut									
118	Yash Prakash Ghormade									
119	Yashasvi R. Thakare									
120	Yogishri Sanjay Uikey									

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Name of Teacher- Dr. P.S. Rawalkar

NABIRA MAHAVIDYALAYA, KATOL
BBA DEPARTMENT
BBA FIRST SEMESTER 2023-24
ASSIGNMENT AND TEST RECORD (RM)

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
1	ABHAY SANJAY SATPUTE	ABSatpute	04	ABSatpute		ABSatpute		—	
2	ABHISHEK RAMBHAU MESHRAM		—						
3	ANKIT UTTAMRAO GONDANE	Gondane	06	Gondane		Gondane		Gondane	
4	ANUSHKA DEVCHANDRA DAHALE		—						
5	ASMITA GANPATRAO GEDAM	Agedam	—	Agedam		Agedam		Agedam	
6	BHAGYASHRI KISANAJI HIWARKAR	B.K. Hiwarkar	07	B.K. Hiwarkar		B.K. Hiwarkar		B.K. Hiwarkar	
7	BHAVESH RAJENDRA KALAMBHE	Bhavesh	06	Bhavesh		Bhavesh		Bhavesh	
8	DHANSHRI SURESH TEKAM	—	—	—	—	—	—		—
9	HARISH DHANRAJ WARTHI	Hwarthi	—			Hwarthi		Hwarthi	
10	KAJAL BHAGWAT KOLHE	KBKolhe	07	KBKolhe		KBKolhe		KBKolhe	
11	KARAN SUNIL MOHARIYA		—						
12	KHUSHALI GUNVANTA MAHORIYA	Kmahoriya	07	Kmahoriya		Kmahoriya		Kmahoriya	
13	KOMAL MANOHAR SONULKAR	KSonulkar	05	KSonulkar		KSonulkar		KSonulkar	
14	LAVKESH MAHADEO GIRI		—						
15	LOVE RAJESH DHOKE		—						
16	LUKESH PURUSHOTTAM CHARDE		—						
17	MAHESH NARENDRA KOLHE		04						
18	MANOJ RAMESH SAWARKAR		—						
19	MAST. VAIBHAV SURESHRAO CHOPADE		—						
20	MUSKAN AYUB PATHAN	Pathan	07	Pathan		Pathan		Pathan	
21	NAYAN DNYANESHWAR JIWATODE	Jiwatode	—	Jiwatode		Jiwatode		Jiwatode	

HOD/Co-ordinator
BBA Department
N.M.V. Katol

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
22	NIKHIL RAMESHRAO SHIRPURKAR		06						
23	NISHA BABAN CHARDE		07						
24	PAWAN RAVINDRA PATIL		—						
25	PAWAN MANOJ HARJAL		04						
26	PAYAL PRAMOD NEHARE		07						
27	PAYAL KISHOR MAKODE		06						
28	POOJA MADAN BOBADE		07						
29	PRACHI PRAMOD NEHARE		07						
30	PRAJWAL BHOJRAJ KALE		—						
31	PRAKRUTI KRUSHNAMURTI PATHAK		04						
32	PRANALI NIRANJAN NASARE		07						
33	PRANALI GUNWANT DESHMUKH		06						
34	PRANAY BANDUJI YEWALE		—						
35	PRANJALI RAMESH CHOPDE		—						
36	PRIYANKA RAVINDRARAO DONGARE		05						
37	RASIKA DINESHRAO KOLAMKAR	—	—	—	—	—	—	—	—
38	RITIK RUPCHAND RAMOD		—						
39	ROCHAK SHARAD KALE		—						
40	ROHINI VILAS BHONGALE		06						
41	RUPESH RAMKRUSHNA RAUT		—						
42	SAHIL SURYAKANT GAIKWAD		06						
43	SAHIL GANESH WAGH		—						
44	SAMIKSHA MAHADEVRAO SURUSE		—						
45	SAMMED ANIL PADOLE		02						
46	SHAHID AKBAR SHEIKH		—						

for HOD/Co-ordinator
BBA Department
N.M.V. Kalol

Sr. No.	Name of Student	ASSIGNMENT 1	TEST 1	ASSIGNMENT 2	TEST 2	ASSIGNMENT 3	TEST 3	ASSIGNMENT 4	TEST 4
47	SHIVANI MUKUNDRAO BHAKTE		06						
48	SHOAIB MEHABOOB SHEIKH		—						
49	SOUMYAK SURENDRAKUMAR NAGDEVE		—	S.Nagdeve		S.S.Nagdeve		S.S.Nagdeve	
50	SWAPNIL NATTHU KHAIRKAR		—						
51	TANUJA RAJESHRAO NASRE		07						
52	TRUPTI SHESHRAOJI SAWDE		07						

for
HOD/Co-ordinator
BBA Department
N.M.V. Katol


Latitude: 21.276888
Longitude: 78.580862
Elevation: 446.05±21 m
Accuracy: 7.0 m
Time: 12-11-2023 10:53
Note: Revesion class first sem, BBA department, NMV, katol


Latitude: 21.276892
Longitude: 78.58087
Elevation: 446.05±4 m
Accuracy: 12.0 m
Time: 12-11-2023 10:54
Note: Revision class first sem, BBA, Department
Powered by NoteCam

Department of Management Studies (M.B.A.)

Nabira Mahavidyalaya, Katol

Dhantoli, Katol, Dist. Nagpur - 441 302

20/11/2023

Sem III Assessment

All the students of Sem III are informed to report at seminar hall as per the below schedule for their assessment of the current semester.

Sem	Date / Time	Event	Special Remarks
Sem III	**23rd Nov. 2023 10:30 a.m.**	**Presentation & Viva Voce** (Each student to **prepare PPT** on their SIP topic & talk for 5-10 mins).	Absenteeism will lead to fine of Rs. 300 flat and signatures on university assessment sheets will not be allowed.

All Students (including those having job / business) shall report on time and in college unifom / ID cards.

Dr. Hitesh Vaswani
H.O.D.
Deptt. of Management Studies
Nabira Mahavidyalaya, Katol

Circulation to:
Dr. Adil Jiwani - Incharge (for all arrangements)
All staff members
Notice Board - Students & Staff
WhatsApp Group - Students & Staff
Notice circulation file

(P.T.O.)

Department of Management Studies (M.B.A.)

Nabira Mahavidyalaya, Katol

Dhantoli, Katol, Dist. Nagpur - 441 302

07/12/2023

All the students of Sem I are informed to report at seminar hall as per the below schedule for their assessment / clearance of the current semester.

Sem	Date / Time	Event	Special Remarks
Sem I	**12th Dec. 2023 10:30 a.m.**	**Assessment - Viva Voce**	Absenteeism will lead to fine of Rs. 300 flat and signatures on university assessment sheets will not be allowed.
Sem I	**09th, 11th & 12th Dec. 2023 (10 am to 3 pm)**	**Clearance** (Will be displayed on 09/12/2023)	Students are required to pay the clearance and fees installment as agreed.

All Students (including those having job / business) shall report on time and in college uniform / ID cards.

Dr. Hitesh Vaswani
H.O.D.
Deptt. of Management Studies
Nabira Mahavidyalaya, Katol

Circulation to:

- Dr. Pradeep Mahajan – Incharge (for clearance)
- Dr. Adil Jiwani - Incharge (for assessment)
- All staff members
- Notice Board - Students & Staff
- WhatsApp Group - Students & Staff
- Notice circulation file

(P.T.O.)

Department of Management Studies (M.B.A.)
Nabira Mahavidyalaya, Katol

24/04/2024

Sem II - Assessment (2023-24)

All the students of Sem II are informed to report at Seminar Hall on Tuesday, 30/04/2024 as per the below schedule for the mentioned events of the current semester.

Date / Time	Event	Special Remarks
30/04/2024 **10:30 a.m.**	**Viva Voce and Assignments, if any.**	Absenteeism will lead to fine of Rs. 300 flat else signatures on university assessment sheets will not be allowed.
30/04/2024 **12:30 p.m.**	**Session of SIP & Specilization**	Separate fine of Rs. 300 if absent.

All Students (including those working) shall report on the stated time and in college unifom / ID cards at the Seminar Hall.

Dr. Hitesh Vaswani
H.O.D.
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Nabira Mahavidyalaya, Katol

Circulation to:
Dr. Pradeep Mahajan - Incharge (for all arrangements)
Notice Board - Students
Classroom - Sem II
Whats App Group - Sem II
All staff members
Notice circulation file