


SSES Amravati's Science Collge, Congress Nagar, Nagpur

Department of Chemistry

Internal Assessment Record-PG- (CIE)-2023-24

Class	Paper	Teacher Name	Sign
Sem-I	Paper-I	S. S. Dhok	
	Paper-II	Shivani R. Sharma	
	Paper-III	Dr. Shubhangi Kere	
	Paper-IV	Dr. S. J. Kere	
Sem-II	Paper-I	Megha Tabhane	
	Paper-II	Dr. S. J. Kere	
	Paper-III	Shivani R. Sharma	
	Paper-IV	-	-
Sem-III	Paper-I	Megha Tabhane	
	Paper-II	Sukanya B. Mishra	
	Paper-III	Dr. S. J. Kere	
	Paper-IV	Shivani R. Sharma	
Sem-IV	Paper-I	Sukanya B. Mishra	
	Paper-II	Dr. Megha N. Tabhane	
	Paper-III	Dr. S. J. Kere	
	Paper-IV	Shivani R. Sharma	



  
 Professor & Head  
 Department of Chemistry,  
 Shri Shivaji Science College  
 Congress Nagar, Nagpur



SSES Amravati's Science College, Congress Nagar Nagpur  
Department of Chemistry

M.Sc Sem I- 2023-24 Total Marks: -20


Paper I (Inorganic Chemistry)

Unit Test No- 1&2 Mark list

Teacher Name: Dr. S.S. Dhote

Sr. No	Roll No.	Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1	Ku	AAFREEN NIGAR ASIF IQBAL ----	10	05	05	20
2	Ku	GAURI PRADIP NASARE	09	05	05	19
3	Ku	JANHVI UMESH FATING	10	05	05	20
4	Ku	KHUSHBU SOMESHWAR CHILBULE	09	05	05	19
5	Ku	LAXMI ANILRAO DHOBE	08	05	04	17
6	Ku	MAHEK DINESH SHINDE	09	05	05	19
7	Ku	MUSKAN SATENDRA KUMBHARE	09	05	05	19
8	Ku	NIDHI RADHESHYAM GUPTA	10	05	05	20
9	Ku	NIKHITA PANDHARI PIPARE	09	05	05	19
10	Ku	PALLAVI PARAM BORKAR	10	05	04	19
11	Ku	PRADNYA ARVIND APTE	10	05	05	20
12	Ku	PRANJU ASHOK AMBULE	10	05	05	20
13	Ku	ROHITA VISHNU PARDHI	10	05	05	20
14	Ku	SEJAL SUBHASH TENGE	10	05	05	20
15	Ku	SHABAHAT MD. IRFAN KHAN	10	05	05	20
16	Ku	TANAYA VINAYAK LANJEWAR	10	05	05	20
17	Ku	TANNU DINESH SINDURKAR	10	05	05	20



  
Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

am Name : FIRST SEMESTER M.Sc.(CHEMISTRY) (NEP)

bject Name : INORGANIC CHEMISTRY

llege Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

ssion : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	393285	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	393286	20211010020899	GAURI PRADIP NASARE	19
3	393287	20211046710073	JANHVI UMESH FATING	20
4	393288	2021100960057	KHUSHBU SOMESHWAR CHILBULE	19
5	393289	20201010012689	LAXMI ANILRAO DHOBE	17
6	393290	20211035504721	MAHEK DINESH SHINDE	19
7	393291	20211011905624	MUSKAN SATENDRA KUMBHARE	19
8	393292	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	393293	20181082913886	NIKHITA PANDHARI PIPARE	19
10	393294	2014016600596843	PALLAVI PARAM BORKAR	19
11	393295	20173006509619	PRADNYA ARVIND APTE	20
12	393296	20211055211891	PRANJU ASHOK AMBULE	20
13	393297	20211058500398	ROHITA VISHNU PARDHI	20
14	393298	20211041905478	SEJAL SUBHASH THENGE	20
15	393299	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	393300	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	393301	20211013829193	TANNU DINESH SINDURKAR	20

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Signature of  
Examiner

(Dr. S. J. Kene)



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Inorganic Chemistry)

Session : 2023-24

Unit Test

Total Mark's -20

**Attempt any 4**

Q.1) What are isopoly and heteropoly acids ? How are they obtained ? Discuss in brief.

Q.2) What are the factors favouring M-M bonding ? Discuss the structure of  $RC_2Cl_8^{2-}$ .

Q.3) Give classification of metal clusters in detail by citing various examples of each type.

Q.4) Explain formation of delta bond in metal acetate clusters.

Q.5) What is styx number ? Sketch the possible topological structures of following in terms of styx number :

(i)  $B_2H_6$

(ii)  $B_5H_{11}$

(iii)  $B_4H_{10}$

(iv)  $B_3H_9$





SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Inorganic Chemistry)

Session :2023-24

Assignment

Total Marks: 20

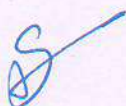
Q.1. Explain Hund's rule, Hole formalism and determination of the term symbol for  $d^1$  and  $d^9$  configuration.

Q.2. Draw Tanabe – Sugano diagram of octahedral complexes with  $d^2$  and  $d^8$  configuration.

Q.3. Write a note on Nitrosylating agents for synthesis of metal nitrosyls.

Q.4. What is Dinitrogen and dioxygen complexes.

Q.5. What is Inert and Labile complexes. Explain with example.





Class :- MSc Chemistry I Sem(I Year)  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023- 2024

Name of Teacher :- *Sarang S. Dhok*

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			Date	14/8/23	22/8/23	23/8/23	28/8/23	29/8/23	30/8/23	4/9/23	8/9/23	11/9/23	12/9/23	20/9/23	25/9/23	26/9/23							
1	Ku	AAFREEN NIGAR ASIF IQBAL ---		P	P	.	P	.	P	.	P	P	P	.	P								
2	Ku	GAURI PRADIP NASARE		P	P		P	P	P	P	P	P	P	.	P								
3	Ku	JANHVI UMESH FATING		.		P		P	P	P	P	P	P	.	P								
4	Ku	KHUSHBU SOMESHWAR CHILBULE		P	P	P		P	P	P	P	P	P	P	P								
5	Ku	MAHEK DINESH SHINDE		P	P		P	P	P	P	P	P	P	.	P								
6	Ku	MUSKAN SATENDRA KUMBHARE		.		P		P	P	P	P	P	P	.	P								
7	Ku	NATASHA MAHAJAN		P	P	P		P	P	P	P	P	P	P	P								
8	Ku	NIDHI RADHESHYAM GUPTA		P		P	P		P		P	P	P	P	P								
9	Ku	NIKHITA PANDHARI PIPARE		.	P			P		P	P	P	P	.	P								
10	Ku	PALLAVI PARAMBORKAR		P	P	P	P		P	P	P	P	P	P	P								
11	Ku	PRADNYA ARVIND APTE		P	P	P	P		P		P	P	P	P	P								
12	Ku	PRANJU ASHOK AMBULE		.	P	.	P		P	P	P	P	P	.	P								
13	Ku	ROIHTA VISHNU PARDHI		P	P		P		P	P	P	P	P	P	P								
14	Ku	SEJAL SUBHASH THENGE		P	P	P		P	P	P	P	P	P	P	P								
15	Ku	SHABAHAT MD. IRFANKHAN		P	P		P	P	P	P	P	P	P	.	P								
16	Ku	TANAYA VINAYAK LANJEWAR		P	P	P		P	P	P	P	P	P	P	P								
17	Ku	TANNU DINESH SINDURKAR		.	P		P		P	P	P	P	P	P	P								

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**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem I- 2023-24 Total Marks: -20

Paper II (Physical Chemistry)

Unit Test No- 1&2 Mark list

Teacher Name: Ms. Shivani R. Sharma

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		Ku AAFREEN NIGAR ASIF IQBAL ----	10	05	05	20
2		Ku GAURI PRADIP NASARE	10	05	04	19
3		Ku JANHVI UMESH FATING	10	05	05	20
4		Ku KHUSHBU SOMESHWAR CHILBULE	10	05	04	19
5		Ku LAXMI ANILRAO DHOBE	09	04	04	17
6		Ku MAHEK DINESH SHINDE	10	05	05	20
7		Ku MUSKAN SATENDRA KUMBHARE	10	05	04	19
8		Ku NIDHI RADHESHYAM GUPTA	10	05	05	20
9		Ku NIKHITA PANDHARI PIPARE	10	05	04	19
10		Ku PALLAVI PARAM BORKAR	10	05	04	19
11		Ku PRADNYA ARVINDAPTE	10	05	05	20
12		Ku PRANJU ASHOK AMBULE	10	05	05	20
13		Ku ROHITA VISHNU PARDHI	10	05	05	20
14		Ku SEJAL SUBHASH THENGE	10	05	05	20
15		Ku SHABAHAT MD. IRFAN KHAN	10	05	05	20
16		Ku TANAYA VINAYAK LANJEWAR	10	05	05	20
17		Ku TANNU DINESH SINDURKAR	10	05	04	19

*Shivani*



*Shivani*  
Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FIRST SEMESTER M.Sc.(CHEMISTRY) (NEP)

Subject Name : PHYSICAL CHEMISTRY

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	393285	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	393286	20211010020899	GAURI PRADIP NASARE	19
3	393287	20211046710073	JANHVI UMESH FATING	20
4	393288	2021100960057	KHUSHBU SOMESHWAR CHILBULE	19
5	393289	20201010012689	LAXMI ANILRAO DHOBE	17
6	393290	20211035504721	MAHEK DINESH SHINDE	20
7	393291	20211011905624	MUSKAN SATENDRA KUMBHARE	19
8	393292	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	393293	20181082913886	NIKHITA PANDHARI PIPARE	19
10	393294	2014016600596843	PALLAVI PARAM BORKAR	19
11	393295	20173006509619	PRADNYA ARVIND APTE	20
12	393296	20211055211891	PRANJU ASHOK AMBULE	20
13	393297	20211058500398	ROHITA VISHNU PARDHI	20
14	393298	20211041905478	SEJAL SUBHASH THENGE	20
15	393299	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	393300	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	393301	20211013829193	TANNU DINESH SINDURKAR	19

Print Date & Time: 16-01-2024 01:57:46 PM

*Signature*  
Signature of  
Examiner

Dr. S. J. Keni



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Physical Chemistry)

Session :2022-23

Unit Test

Total Mark's -20

**Attempt Any 4**

Q.1) Give an account of Lindemann Theory of Unimolecular Reactions.

Q.2) What are Extensive and Intensive Properties? Derive any one Thermodynamic equation of state?

Q.3) Show that a Function  $\Psi = \sin x$  is an acceptable wave function and normalized

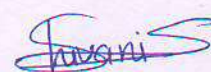
Q.4) Explain the term:

i) Linear Operator

ii) Laplacian Operator

iii) Hamiltonian Operator

Q.5) Explain Nernst Heat Theorem. Give the Significance of Debye  $T^3$  Law.



Shivani R. Sharma



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem I**

**Theory (Physical Chemistry)**

**Session :2023-24**

**Assignment**

**Total Marks: 20**

- Q.1. What is third law of Thermodynamics? Explain Nernst Heat Theorem.
- Q.2. Write down Application of Schrodinger Wave equation in case of Particle in a 3-Dimensional box.
- Q.3. What is Critical Micelle Concentration. Write down mass action model and phase separation model of micelle formation.
- Q.4. Write down expression for Transition State Theory.

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Class :- MSc Chemistry Sem-I  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- *Shivani R. Shama*  
Physical Chemistry

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			Date																				
1	ku	AAFREEN NIGAR ANSARI		P	P	P	P	.	P	P	P	P	P	P	P	P	P	.	P	P	P	P	P
2	ku	GAURI PRADIP NASARE		P	P	P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P
3	ku	JANHVI UMESH FATING		P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	ku	KHUSHBU SOMESHWAR CHILBULE		P	P	P	P	.	.	.	.	P	P	P	P	P	P	P	P	P	P	P	P
5	ku	Laxmi Dhobe		P	P	P	P	.	P	P	P	P	P	P	P	P	P	P	.	P	P	P	P
6	ku	MAHEK DINESH SHINDE		P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P
7	ku	MUSKAN SATENDRA KUMBHARE		P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P
8	ku	NIDHI RADHESHYAM GUPTA		P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P
9	ku	NIKHITA PANDHARI PIPARE		P	P	P	P	P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P
10	ku	NIKITA MANOHAR SALVE		P	P	P	P	P	P	P	P	P	P	P	.	P	P	P	.	P	P	P	P
11	ku	PALLAVI PARAM BORKAR		P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P
12	ku	PRADNYA ARVIND APTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	ku	PRANJU ASHOK AMBULE		P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P
14	ku	ROHITA VISHNU PARDHI		P	.	.	.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	ku	SEJAL SUBHASH THENGE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	ku	SHABAHAT IRFAN KHAN		P	P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P
18	ku	TANAYA VINAYAK LANJEWAR		P	P	P	P	P	P	P	P	P	P	P	P	.	.	P	P	P	P	P	P
19	ku	TANNU DINESH SINDURKAR		P	P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	P	P	P

%  
Attendance

90%  
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95%  
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80%  
100%  
90%  
90%  
90%

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**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem I- 2023-24 Total Marks: -20

Paper III (Biomolecules)


Unit Test No- 1 & 2 Mark list

Teacher Name: Dr. S. J. Kene/ Megha Tabhane

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1	Ku	AAFREEN NIGAR ASIF IQBAL	10	05	05	20
2	Ku	GAURI PRADIP NASARE	09	05	05	19
3	Ku	JANHVI UMESH FATING	10	05	05	20
4	Ku	KHUSHBU SOMESHWAR CHILBULE	10	05	04	19
5	Ku	LAXMI ANILRAO DHOBE	09	04	04	17
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9	Ku	NIKHITA PANDHARI PIPARE	10	05	04	19
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11	Ku	PRADNYA ARVIND APTE	10	05	04	19
12	Ku	PRANJU ASHOK AMBULE	10	05	05	20
13	Ku	ROHITA VISHNU PARDHI	10	05	05	20
14	Ku	SEJAL SUBHASH THENGE	10	05	05	20
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17	Ku	TANNU DINESH SINDURKAR	10	05	04	19

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Congress Nagar, Nagpur.



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FIRST SEMESTER M.Sc.(CHEMISTRY) (NEP)

Subject Name : BIOMOLECULES

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	393285	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	393286	20211010020899	GAURI PRADIP NASARE	19
3	393287	20211046710073	JANHVI UMESH FATING	20
4	393288	2021100960057	KHUSHBU SOMESHWAR CHILBULE	19
5	393289	20201010012689	LAXMI ANILRAO DHOBE	17
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7	393291	20211011905624	MUSKAN SATENDRA KUMBHARE	20
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10	393294	2014016600596843	PALLAVI PARAM BORKAR	19
11	393295	20173006509619	PRADNYA ARVIND APTE	19
12	393296	20211055211891	PRANJU ASHOK AMBULE	20
13	393297	20211058500398	ROHITA VISHNU PARDHI	20
14	393298	20211041905478	SEJAL SUBHASH THENGE	20
15	393299	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	393300	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	393301	20211013829193	TANNU DINESH SINDURKAR	19

Print Date & Time: 16-01-2024 01:58:21 PM

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Signature of  
Examiner

C Dr. S. J. Kene



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Biomolecules)

Session :2023-24

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1) Explain in details Types of naturally occurring Sugars.

Q.2) How is the structure of Maltose established?

Q.3) Write notes on

i) Chitin

ii) Inositol

iii) Heparin

Q.4) Discuss in Brief Chemistry of Starch.

Stony

Dr. S. J. Kene



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Biomolecules)

Session :2023-24

Date: 12/09/2023

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- 1) Illustrate the Strecker Synthesis of amino acids.
- 2) ) Comments on the Following:
  - I) Amino Sugars
  - ii) Iso-electric point in amino acids.
- 3) Write notes on
  - i) Chitin
  - ii) Inositol
  - iii) Heparin
- 4) Write steps involved in solid phase peptide synthesis.

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**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem I- 2023-24 Total Marks: -20

Paper IV (Research Methodology)

Unit Test No- 1 & 2 Mark list

Teacher Name: Dr. S.S. Dhote/Dr. S.J.Kene

Sr. No	Roll No.		Students Full Name	Unit Test	Assignment	Attendance	Total
1		Ku	AAFREEN NIGAR ASIF IQBAL ----	10	05	05	20
2		Ku	GAURI PRADIP NASARE	10	05	04	19
3		Ku	JANHVI UMESH FATING	10	05	05	20
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5		Ku	LAXMI ANILRAO DHOBE	09	04	04	17
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12		Ku	PRANJU ASHOK AMBULE	10	05	05	20
13		Ku	ROHITA VISHNU PARDHI	10	05	05	20
14		Ku	SEJAL SUBHASH THENGE	10	05	05	20
15		Ku	SHABAHAT MD. IRFAN KHAN	10	05	05	20
16		Ku	TANAYA VINAYAK LANJEWAR	10	05	05	20
17		Ku	TANNU DINESH SINDURKAR	10	05	04	19



*SJK*  
Professor & Head  
Department of Chemistry,  
Sri Shivaji Science College  
Congress Nagar, Nagpur.

Story



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FIRST SEMESTER M.Sc.(CHEMISTRY) (NEP)  
Subject Name : RESEARCH METHODOLOGY  
College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE  
Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	393285	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	393286	20211010020899	GAURI PRADIP NASARE	19
3	393287	20211046710073	JANHVI UMESH FATING	20
4	393288	2021100960057	KHUSHBU SOMESHWAR CHILBULE	19
5	393289	20201010012689	LAXMI ANILRAO DHOBE	17
6	393290	20211035504721	MAHEK DINESH SHINDE	20
7	393291	20211011905624	MUSKAN SATENDRA KUMBHARE	20
8	393292	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	393293	20181082913886	NIKHITA PANDHARI PIPARE	19
10	393294	2014016600596843	PALLAVI PARAM BORKAR	19
11	393295	20173006509619	PRADNYA ARVIND APTE	20
12	393296	20211055211891	PRANJU ASHOK AMBULE	20
13	393297	20211058500398	ROHITA VISHNU PARDHI	20
14	393298	20211041905478	SEJAL SUBHASH THENGE	20
15	393299	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	393300	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	393301	20211013829193	TANNU DINESH SINDURKAR	19

Print Date & Time: 16-01-2024 01:58:49 PM

*Sund*  
Signature of  
Examiner

(Dr. S. J. Kone)



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Research Methodology)

Session :2023-24

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1) what are the methods of validating accuracy of newly developed analytical Methods

Q.2 Explain the terms: -

(i) Correlation co-efficient (ii) Least square method

Q.3 A new method gave following results for Concentration of copper in a NIST Method std. (Certified to contain 12.5 ppm copper): 10.2, 12.7, 8.6, 17.5, 11.2 and 11.5. Determine if the mean of results differs significantly from the true value at 95% confidence level if  $t=2.571$  for five degrees of freedom.

Q.4 What is ' Linear Regression Analysis '? Obtain the equation of regression line between concentration and fluorescence intensity.

Conc (ppm)	2	4	6	8	10
Intensity	13	25	36	44	60

Skany

Dr. S. J. Kene



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Research Methodology)

Session :2023-24

Date: 25/09/2023

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

1) What are Significant Figures?

Give Rules for determining the number of significant figures. How many significant figures do each of the following numbers have?

i) 300.09      ii)  $7.5 \times 10^{10}$       iii) 3000.0

2) Classify the Errors.

3) Discuss the types of analytical techniques.

4) Give application of Ms-Excel in statistical analysis.

Spamy



Class :- MSc Chemistry Sem-I  
Theory/Practical (RM/Biomolecules)

Science College, Congress Nagar, Nagpur.

Name of Teacher :-

2023-2024

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%
			Date																						
1	ku	AAFREEN NIGAR ANSARI	22/08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
2	ku	GAURI PRADIP NASARE	23/08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
3	ku	JANHVI UMESH FATING	24/08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
4	ku	KHUSHBU SOMESHWAR CHILBULE	28/08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
5	ku	LEENA MOHAN MIRE	31/08	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
6	ku	MAHEK DINESH SHINDE	01/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	19	82
7	ku	MUSKAN SATENDRA KUMBHARE	05/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
8	ku	NIDHI RADHESHYAM GUPTA	07/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
9	ku	NIKHITA PANDHARI PIPARE	08/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
10	ku	NIKITA MANOHAR SALVE	11/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
11	ku	PALLAVI PARAM BORKAR	12/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	91
12	ku	PRADNYA ARVIND APTE	13/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	91
13	ku	PRANJU ASHOK AMBULE	14/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
14	ku	ROHITA VISHNU PARDHI	15/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
15	ku	SEJAL SUBHASH THENGE	16/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
16	ku	SHABAHAT IRFAN KHAN	17/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
17	ku	SHIVANI JAYANT DAREKAR	18/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
18	ku	TANAYA VINAYAK LANJEWAR	19/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
19	ku	TANNU DINESH SINDURKAR	20/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
20		Laxmi (Cancelled)	21/09	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	77
21																									
22																									
23																									
24																									

S.K.M.  
Dr. S. J. Kera



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem II- 2023-24 Total Marks: -20

Paper I (Organic Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Megha Tabhane

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1	Ku	AAFREEN NIGAR ASIF IQBAL	10	05	05	20
2	Ku	GAURI PRADIP NASARE	10	05	05	20
3	Ku	JANHVI UMESH FATING	10	05	05	20
4	Ku	KHUSHBU SOMESHWAR CHILBULE	09	04	05	18
5	Ku	LAXMI ANILRAO DHOBE	04	04	02	10
6	Ku	MAHEK DINESH SHINDE	10	05	04	19
7	Ku	MUSKAN SATENDRA KUMBHARE	10	05	05	20
8	Ku	NIDHI RADHESHYAM GUPTA	10	05	05	20
9	Ku	NIKHITA PANDHARI PIPARE	10	05	04	19
10	Ku	PALLAVI PARAM BORKAR	10	05	05	20
11	Ku	PRADNYA ARVIND APTE	10	05	04	19
12	Ku	PRANJU ASHOK AMBULE	10	05	04	19
13	Ku	ROHITA VISHNU PARDHI	10	05	04	19
14	Ku	SEJAL SUBHASH THENGE	10	05	04	19
15	Ku	SHABAHAT MD. IRFAN KHAN	10	05	05	20
16	Ku	TANAYA VINAYAK LANJEWAR	10	05	05	20
17	Ku	TANNU DINESH SINDURKAR	10	05	05	20

*Sukanya*  
Sukanya B. Mishra



*Megha*  
Faculty In-charge  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : SECOND SEMESTER M.Sc.(CHEMISTRY) (NEP)

Subject Name : ORGANIC CHEMISTRY

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	398890	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	398891	20211010020899	GAURI PRADIP NASARI	20
3	398892	20211046710073	JANHVU UMESH FATING	20
4	398893	2021100960057	KHU SHIBU SOMESHWAR CHILBULE	18
5	398894	20201010012689	LAXMI ANILRAO DHOBE	10
6	398895	20211035504721	MAHEK DINESH SHINDE	19
7	398896	20211011905624	MUSKAN SATE NDRAKUMBHARE	20
8	398897	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	398898	20181082913886	NIKHITA PANDHARI PIPARE	19
10	398899	2014016600596843	PALLAVI PARAM BORKAR	20
11	398900	20173006509619	PRADNYA ARVIND APTE	19
12	398901	20211055211891	PRANJU ASHOK AMBUTE	19
13	398902	20211058500398	ROHITA VISHNU PARDHI	19
14	398903	20211041905478	SEJAL SUBHASH THENGE	19
15	398904	20211046710121	SHABHANI MD IRFAN KHAN	20
16	398905	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	398906	20211013829193	TANNU DINESH SINDURKAR	20

Print Date & Time 01-06-2024 11:42:17 AM

Skant  
Signature of Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (ORGANIC CHEMISTRY)

Session :2023-24

Unit Test 1

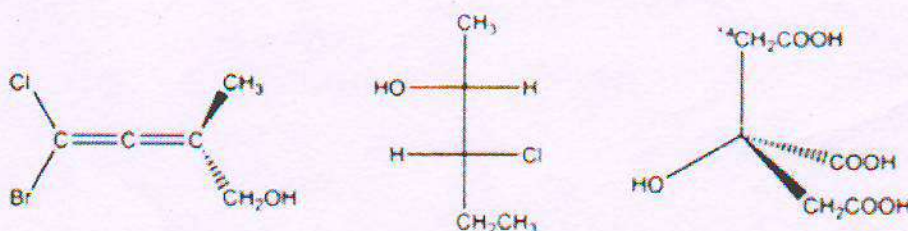
Total Mark's -20

Teacher's Name : Sukanya B. mishra

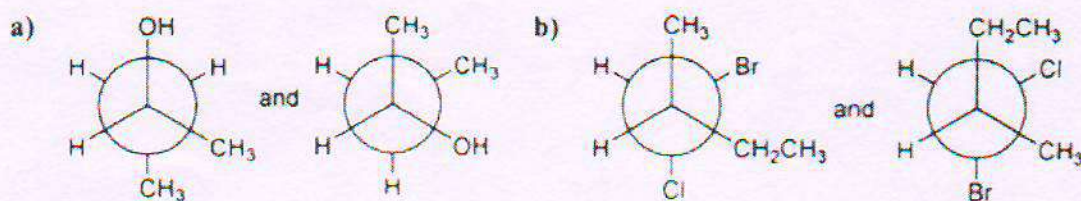
Time :-1 hr 5 marks each

ATTEMPT ANY FOUR

1. explain the role of cyclodextrin as drug carrier with example.
2. explain the following terms with suitable example.
  - i) catenanes
  - ii) rotaxanes.
3. assign a configuration R or S to each of these compounds.



4. Are the following pairs identical, enantiomers, diastereomers or constitutional isomers?



5. write a suitable mechanism of the following reactions.



*Sukanya*  
Sukanya B. Mishra



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem II**

**Theory (ORGANIC CHEMISTRY)**

**Session :2023-24**

**Assignment            Total Mark's -20**

**Teacher's Name : Sukanya B. Mishra**

**ATTEMPT ANY FOUR**

1. Give the mechanism of perkin reaction.
2. Explain regio and chemoselectivity involving in hydrogenation of double bonds.
3. state and explain stereo chemical orientation of hydroboration reaction.
4. comment on following;
  - i) aldol condensation
  - ii) addition of Grignard reagents
5. state the mechanistic details of mannich reaction.





Class :- MSc Chemistry I Sem (I Year)  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- *Sukanya B. Mishra*  
Organic Chemist

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			Date	21/04/24	23/04/24	25/04/24	26/04/24	28/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24	29/04/24			
1	Ku	AAFREEN NIGAR ASIF IQBAL ---		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
2	Ku	GAURI PRADIP NASARE		P	P	P	P	P	A	P	P	P	P	P	P	P	P	P					
3	Ku	JANHVI UMESH FATING		P	P	P	A	P	P	P	P	P	P	P	P	P	P	P					
4	Ku	KHUSHBU SOMESHWAR CHILBULE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
5	Ku	MAHEK DINESH SHINDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
6	Ku	MUSKAN SATENDRA KUMBHARE		P	P	P	P	P	P	P	P	P	P	P	P	A	P	P					
7	Ku	NATASHA MAHAJAN		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P					
8	Ku	NIDHI RADHESHYAM GUPTA		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
9	Ku	NIKHITA PANDHARI PIPARE		P	P	A	P	P	P	P	P	P	P	P	P	P	P	P					
10	Ku	PALLAVI PARAM BORKAR		P	P	A	P	P	P	P	P	P	P	P	P	P	P	P					
11	Ku	PRADNYA ARVIND APTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
12	Ku	PRANJU ASHOK AMBULE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
13	Ku	ROHITA VISHNU PARDHI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
14	Ku	SEJAL SUBHASH THENGE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
15	Ku	SHABAHAT MD. IRFAN KHAN		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
16	Ku	TANAYA VINAYAK LANJEWAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					
17	Ku	TANNU DINESH SINDURKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P					

*Sukanya B. Mishra*



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem II- 2023-24 Total Marks: -20

Paper II (Analytical Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Dr. S. J. Kene

Sr. No	Roll No.		Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		Ku	AAFREEN NIGAR ASIF IQBAL	10	05	05	20
2		Ku	GAURI PRADIP NASARE	10	05	05	20
3		Ku	JANHVI UMESH FATING	10	05	05	20
4		Ku	KHUSHBU SOMESHWAR CHIBULE	09	04	04	17
5		Ku	LAXMI ANILRAO DHOBE	04	03	03	10
6		Ku	MAHEK DINESH SHINDE	10	05	04	19
7		Ku	MUSKAN SATENDRA KUMBHARE	10	05	05	20
8		Ku	NIDHI RADHESHYAM GUPTA	10	05	05	20
9		Ku	NIKHITA PANDHARI PIPARE	10	05	04	19
10		Ku	PALLAVI PARAM BORKAR	10	05	05	20
11		Ku	PRADNYA ARVIND APTE	10	05	04	19
12		Ku	PRANJU ASHOK AMBULE	10	05	04	19
13		Ku	ROHITA VISHNU PARDHI	10	05	04	19
14		Ku	SEJAL SUBHASH THENGE	10	05	04	19
15		Ku	SHABAHAT MD. IRFAN KHAN	10	05	05	20
16		Ku	TANAYA VINAYAK LANJEWAR	10	05	05	20
17		Ku	TANNU DINESH SINDURKAR	10	05	05	20



  
Professor in Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.

*Skery*





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet


Exam Name : SECOND SEMESTER M.Sc.(CHEMISTRY) (NEP)

Subject Name : ANALYTICAL CHEMISTRY

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	398890	20211010020819	AAPRULN NIGAR ASHFAQBAL	20
2	398891	20211010020899	GAURI PRADIP NASARI	20
3	398892	20211046710073	JANHVI UMESH TATING	20
4	398893	2021100960057	KHUSHBU SOMESHWAR CHILBULE	17
5	398894	20201010012689	LAXMI ANILRAO DHOBE	10
6	398895	20211035504721	MAHEK DINESH SHINDE	19
7	398896	20211011905624	MUSKAN SATENDRA KUMBHARE	20
8	398897	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	398898	20181082913886	NIKHITA PANDHARI PIPARE	19
10	398899	2014016600596843	PALLAVI PARAM BORKAR	20
11	398900	20173006509619	PRADNYA ARVIND APTE	19
12	398901	20211055211891	PRANJU ASHOK AMBULI	19
13	398902	20211058500398	ROHINI VISHNU PARDHI	19
14	398903	20211041905478	SEJAL SUBHASH THENGE	19
15	398904	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	398905	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	398906	20211013829193	TANU DINESH SINDURKAR	20

  
Signature of Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem II

Theory (Analytical Chemistry)

Session :2023-24

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1 what are conductometric titrations? Show and explain the nature of curves obtained in conductometric titration

i) Oxalic acid against sodium hydroxide solution.

ii) Mixture of oxalic acid and hydrochloric acid against sodium hydroxide solution.

Q.2) Explain the working i) Calomel Electrode ii) Quinhydrone Electrode

Q.3 Explain the effect of dilution on Specific, Molar and equivalent conductance.

Q.4) Explain in Details principle and Construction of Hydrogen Electrode.

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Dr. S. J. Kene



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem II

Theory (Analytical Chemistry)

Session :2023-24

Date: 04/10/2024

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1) Explain classification of analytical method

Q.2) Define Following Terms

a) Molarity

b) Normality

c)mole

d) Formality

Q.3 Give in details Volumetric analysis.

Q.4 Give principle and applications of Flame Photometry.

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Class :- MSc Chemistry Sem-II

Science College, Congress Nagar, Nagpur.

Name of Teacher :- Dr. S. J. Kene

Theory / Practical

(Analytical Chemistry)

2023-2024

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	o/o
			Date	21/02/24	05/02/24	06/02/24	07/02/24	08/02/24	09/02/24	10/02/24	11/02/24	12/02/24	13/02/24	14/02/24	15/02/24	16/02/24	17/02/24	18/02/24	19/02/24	20/02/24	21/02/24	22/02/24	23/02/24		
1	ku	AAFREEN NIGAR ANSARI		P	P	P	P	P	A	A	P	P	P	A	P	P	P	P	P	P	P	P	P	20	86
2	ku	GAURI PRADIP NASARE		P	P	P	P	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	P	21	91
3	ku	JANHVI UMESH FATING		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
4	ku	KHUSHBU SOMESHWAR CHILBULE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
5	ku	Laxmi Dhobe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	07	30
6	ku	MAHEK DINESH SHINDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	91
7	ku	MUSKAN SATENDRA KUMBHARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
8	ku	NIDHI RADHESHYAM GUPTA		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
9	ku	NIKHITA PANDHARI PIPARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
10	ku	NIKITA MANOHAR SALVE																						22	95
11	ku	PALLAVI PARAM BORKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
12	ku	PRADNYA ARVIND APTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
13	ku	PRANJU ASHOK AMBULE		A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95
14	ku	ROHITA VISHNU PARDHI		A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
15	ku	SEJAL SUBHASH THENGE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
16	ku	SHABAHAT IRFAN KHAN		A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	86
18	ku	TANAYA VINAYAK LANJEWAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	91
19	ku	TANNU DINESH SINDURKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	95

S.K.M.

Dr. S. J. Kene



SSES Amravati's Science College, Congress Nagar Nagpur  
Department of Chemistry

M.Sc Sem II- 2023-24 Total Marks: -20  
Paper III (Organic Reaction Mechanism)

Unit Test No- 1 & 2 Mark list

Teacher Name: Ms. Shivani R. Sharma

Sr. No	Roll No.	Students Full Name	Unit Test I (05)	Assignment (05)	Attendance (05)	Total (20)
1		AAFREEN NIGAR ASIF IQBAL	10	05	05	20
2	Ku	GAURI PRADIP NASARE	10	05	05	20
3		JANHVI UMESH FATINGI	10	05	05	20
4		KHUSHBU SOMESHWAR CHILBULE	10	04	04	18
5		LAXMI ANIL RAO DHOBI	06	02	02	10
6		MAHEK DINESH SHINDE	10	05	04	19
7	Ku	MUSKAN SATENDRA KUMBHARE	10	05	05	20
8	Ku	NIDHI RADHESHYAM GUPTA	10	05	05	20
9	Ku	NIKHITA PANDHARI PIPARI	10	05	04	19
10	Ku	PALLAVI PARAM BORKAR	10	05	05	20
11	Ku	PRADNYA ARVIND APTI	10	05	04	19
12	Ku	PRANJU ASHOK AMBULE	10	05	04	19
13	Ku	ROHITA VISHNU PARDHI	10	05	04	19
14	Ku	SEJAL SUBHASH THENGE	10	05	04	19
15	Ku	SHABAHAT MD. IRFAN KHAN	10	05	05	20
16	Ku	TANAYA VINAYAK LANJEWAR	10	05	05	20
17	Ku	TANNU DINESH SINDURKAR	10	05	05	20

*Shivani R. Sharma*



*Shivani R. Sharma*

Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College,  
Congress Nagar, Nagpur





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : SECOND SEMESTER M.Sc.(CHEMISTRY) (NEP)


Subject Name : ORGANIC REACTION MECHANISM

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	398890	20211010020819	AAFREEN NIGAR ASIF IQBAL	20
2	398891	20211010020899	GAURI PRADIP NASARE	20
3	398892	20211046710073	JANHVI UMESH FATINGI	20
4	398893	2021100960057	KHUSHBU SOMESHWAR CHILBULE	18
5	398894	20201010012689	LAXMI ANILRAO DHOBE	10
6	398895	20211035504721	MAHEK DINESH SHINDE	19
7	398896	20211011905624	MUSKAN SATENDRA KUMBHARE	20
8	398897	20191015506398	NIDHI RADHESHYAM GUPTA	20
9	398898	20181082913886	NIKHITA PANDHARI PIPARI	19
10	398899	2014016600596843	PALLAVI PARAM BORKAR	20
11	398900	20173006509619	PRADNYA ARVIND APTI	19
12	398901	20211055211891	PRANJU ASHOK AMBULE	19
13	398902	20211058500398	ROHITA VISHNU PARDHI	19
14	398903	20211041905478	SEJAL SUBHASH THENGE	19
15	398904	20211046710121	SHABAHAT MD IRFAN KHAN	20
16	398905	20211045103110	TANAYA VINAYAK LANJEWAR	20
17	398906	20211013829193	TANU DINESH SINDURKAR	20

Print Date & Time 01-06-2024 11:55:04 AM

  
Signature of Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Organic Reaction Mechanism)

Session : 2023-24

Unit Test

Total Mark's -20

**Attempt Any 4**

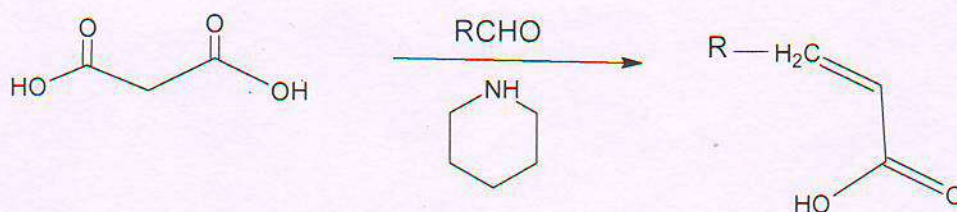
Q.1) Discuss how 1,2 shift is involved in pinacol-pinacolone rearrangement.

Q.2) Write the statements and mechanism of the following rearrangement reactions:

(i) Favorskii reactions

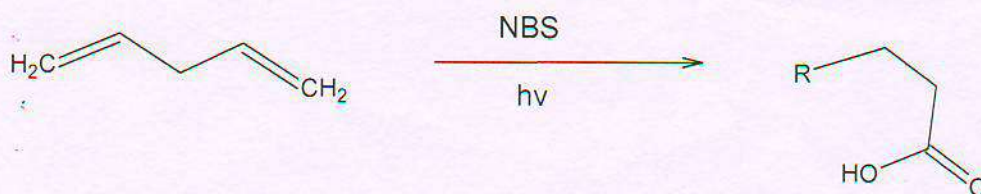
(ii) Beckmann rearrangement

Q.3) Discuss the mechanism of the following conversion:



Q.4) Discuss with example Wagner-Meerwein Rearrangement.

Q.5) Provide mechanism for the following reactions:



*Shivani R. Sharma*



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Organic Reaction Mechanism)

Session :2023-24

Assignment

Total Marks: 20

Q.1. Write down Saytzeff and Hoffman's rule with example.

Q.2. Write Reaction and Mechanism of Aldol, Knoevenagel and Claisen Reaction.

Q.3. What is Free Radical Reaction? Explain Hoffmann-Loefer-Freytag reaction.

Q.4. Write down stereochemistry and synthetic applications of Pinacol-Pinacolone, Wagner-Meerwein, Tiffenev-Demjnov ring expansion, Arndt-Eistert synthesis.

Q.5. Write down the reactivity and selectivity principle of halogenation at an alkyl carbon, allylic carbon (NBS), hydroxylation at an aromatic carbon by means of Fenton's reagent.





Class :- MSc Chemistry Sem-II  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- Shivani R. Sharma  
Organic Rea<sup>n</sup> mechanism

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Attendance %
			Date	2/02/24	5/02/24	6/02/24	13/02/24	20/02/24	26/02/24	27/02/24	5/03/24	16/07/24	28/04/24	18/04/24	19/04/24	20/04/24	22/04/24	23/04/24	24/04/24	25/04/24	26/04/24	27/04/24	30/04/24	
1	ku	AAFREEN NIGAR ANSARI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
2	ku	GAURI PRADIP NASARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
3	ku	JANHVI UMESH FATING			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
4	ku	KHUSHBU SOMESHWAR CHILBULE			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
5	ku	Laxmi Dhobe			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	55%
6	ku	MAHEK DINESH SHINDE			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
7	ku	MUSKAN SATENDRA KUMBHARE			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
8	ku	NIDHI RADHESHYAM GUPTA			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
9	ku	NIKHITA PANDHARI PIPARE				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
10	ku	<del>NIKHITA MANOHAR SALVE</del>																						
11	ku	PALLAVI PARAM BORKAR				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
12	ku	PRADNYA ARVIND APTE				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
13	ku	PRANJU ASHOK AMBULE				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
14	ku	ROHITA VISHNU PARDHI				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
15	ku	SEJAL SUBHASH THENGE				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
16	ku	SHABAHAT IRFAN KHAN				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
18	ku	TANAYA VINAYAK LANJEWAR				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
19	ku	TANNU DINESH SINDURKAR				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%

*Shivani S.*



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem III- 2023-24 Total Marks: -20

Paper I (Organic Chemistry Sp.-I)

Unit Test No- 1 & 2 Mark list

Teacher Name: Suknya Mishra

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	05	04	19
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH KUMAR SINGH	10	05	05	20
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	05	20
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	05	04	19
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	05	20



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet


Exam Name : THIRD SEMESTER M.Sc. (CHEMISTRY) (CBCS)

Subject Name : SPECTROSCOPY-I

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	263218	20191015400852	AMOL SHALIKRAM DHANKAR	19
2	263219	20201000114883	CHAITANYA CHINTAMAN KOHAPARE	19
3	263220	20201070115365	DIPALI NARENDRA DUDHE	20
4	263221	20201000114892	GULSHAN NILESH GOLHAR	20
5	263222	20201010012674	KANCHAN PRABHA SANTOSH KUMAR SINGH	20
6	263223	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
7	263224	695693060440	SAKSHI SHIVAJI MOHITE	20
8	263225	20201011607489	SAKSHI VIJAY KOTHE	20
9	263226	20201010012801	SANA SAGIR KHAN	20
10	263227	20201055210641	SEJAL MAHENDRA BHARNE	20
11	263228	20201010012809	SEJAL SANJAY BULKUNDE	20
12	263229	20201000114851	TULIKA TAPASH BANERJEE	20
13	263230	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	19
14	263231	20201010012875	VASUKI SURESH DABHANE	19
15	263232	20201011607589	VISHAKHA SANJAY MISAL	20
16	263243	2021016600685715	AAKANSHA RAJKUMAR DANDEWAR	18
17	263244	2021016600736105	AASTHA RUSHIPAL PATLE	18
18	263245	2021016600725815	NISHANT BHOJRAJ DHOBALE	18
19	263246	2021016600684074	SANIYA AMINBEG MIRZA	18
20	263247	2021016600566013	SWASTIK SANJAY NANDANWAR	18
21	263248	2021016600544725	VISHAL RAJKUMAR KHARCHWAL	18

  
Signature of  
Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (special I – organic)

Session :2023-24

Unit Test

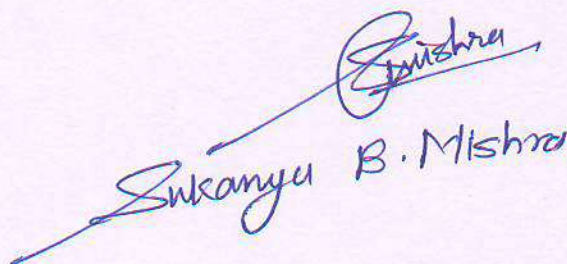
Total Mark's -20

Teacher's Name : Sukanya B. mishra

Time :-1 hr 5 marks each

**ATTEMPT ANY FOUR**

1. What are the norrish type 1 reactions? Give its mechanism.
2. What are the photo fries rearrangements? explain with suitable example
3. Explain transfer of excitation energy through singlet and triplet states.
4. Explain oxidation with PDC and reduction with  $\text{NaBH}_4$ .
5. Discuss the following;
  - i) oxidation with  $\text{KMnO}_4$  in alkaline and neutral medium
  - ii) oxidation of aldehyde with jones reagent.

  
Sukanya B. Mishra



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem III**

**Theory (special I – Organic)**

**Session :2023-24**

**Assignment**

**Teacher's Name : Sukanya B. mishra**

- 1) Give the synthesis of progesterone.
- 2) Explain in brief types of carbohydrate.
- 3) Discuss the structural determination of polypeptide.
- 4) Explain shikimic acid pathway in detail.
- 5) Explain solid phase peptide synthesis.
- 6) Explain synthesis of estrone in detail.
- 7) Discuss the synthesis of cynidine.
- 8) Explain the chemistry of starch and cellulose.
- 9) Give the synthesis of apigenin in detail.
- 10) Explain the stereochemistry of amino acids.



Class :- MSc Chemistry III Sem(II Year)  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023- 2024

Name of Teacher :- Sukanya B. Mishra  
Special - II

Sr. No	Roll	Students Full Name	Period																				% Attendance
			Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	Ku	AMOL SHALIKRAM DHANKAR	02/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
2		CHAITANYA CHINTAMAN KOHAPARE	04/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
3	Ku	DIPALI NARENDRA DUDHE	05/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
4	Ku	GULSHAN NILESH GOLHAR	08/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
5	Ku	KANCHAN PRABHA SANTOSH	08/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
6	Ku	PRAKARSHA OMPRAKASH KHADSE	11/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
7	Ku	SAKSHI SHIVAJI MOHITE	12/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
8	Ku	SAKSHI VIJAY KOTHE	13/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
9	Ku	SANA SAGIR KHAN	13/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
10	Ku	SEJAL MAHENDRA BHARNE	14/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
11	Ku	SEJAL SANJAY BULKUNDE	16/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
12	Ku	TULIKA TAPASH BANERJEE	18/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	20/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
14	Ku	VASUKI SURESH DABHANE	21/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
15	Ku	VISHAKHA SANJAY MISAL	22/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
			23/09/23	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%

Sukanya B. Mishra  
Sukanya B. Mishra



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem III- 2023-24 Total Marks: -20


Paper II (Organic Chemistry Sp.-II)

Unit Test No- 1 &2 Mark list

Teacher Name: Megha Tabhane

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	05	04	19
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH	10	05	05	20
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	05	20
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	04	19
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	09	05	05	19
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	05	20



  
Professor in Charge  
Department of Chemistry  
Shri Shivaji Science College  
Congress Nagar Nagpur

Signature of  
Examiner





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : THIRD SEMESTER M.Sc. (CHEMISTRY) (CBCS)  
Subject Name : SPECIAL-II: ORGANIC CHEMISTRY  
College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE  
Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	263218	20191015400852	AMOL SHALIKRAM DHANKAR	19
2	263219	20201000114883	CHAITANYA CHINTAMAN KOHAPARE	19
3	263220	20201070115365	DIPALI NARENDRA DUDHE	20
4	263221	20201000114892	GULSHAN NILESH GOLHAR	20
5	263222	20201010012674	KANCHAN PRABHA SANTOSH KUMAR SINGH	20
6	263223	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
7	263224	695693060440	SAKSHI SHIVAJI MOHITE	20
8	263225	20201011607489	SAKSHI VIJAY KOTHE	20
9	263226	20201010012801	SANA SAGIR KHAN	20
10	263227	20201055210641	SEJAL MAHENDRA BHARNE	20
11	263228	20201010012809	SEJAL SANJAY BULKUNDE	20
12	263229	20201000114851	TULIKA TAPASH BANERJEE	20
13	263230	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	19
14	263231	20201010012875	VASUKI SURESH DABHANE	19
15	263232	20201011607589	VISHAKHA SANJAY MISAL	20
16	263245	2021016600725815	NISHANT BHOJRAJ DHOBALE	18
17	263246	2021016600684074	SANIYA AMINBEG MIRZA	18
18	263247	2021016600566013	SWASTIK SANJAY NANDANWAR	18
19	263248	2021016600544725	VISHAL RAJKUMAR KHARCHWAL	18

*Sony*  
Signature of  
Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (special II – organic)

Session :2023-24

Unit Test 1

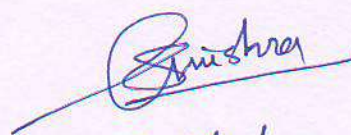
Total Mark's -20

Teacher's Name : Sukanya B. mishra

Time :-1 hr 5 marks each

**ATTEMPT ANY FOUR**

1. Discuss the classification of terpenoids along with isoprene rule.
2. Write the steps involved in the synthesis of haemoglobin.
3. Discuss the steps involved in the biosynthesis of camphor.
4. How is the structure of citral proved by degradation and its synthesis.
5. Comment on the following;
  - i) structure of geraniol
  - ii) functions of chlorophyll a and b

  
Sukanya B. Mishra



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem III  
Theory (special II – organic)**

**Session :2023-24**

**Assignment**

**Teacher's Name : Sukanya B. mishra**

- 1) Discuss the classification of terpenoids.
- 2) Explain the synthesis of asperine.
- 3) Explain in brief the structure and synthesis of morphine.
- 4) Discuss the synthesis of nicotine with mechanism.
- 5) Explain the synthesis of epheridiine with mechanism.
- 6) Discuss biosynthesis of nicotine,
- 7) Explain the structural determination of steroids.
- 8) Discuss the synthesis of testosterone.
- 9) Explain biosynthesis of flavonoids.
- 10) Explain the occurrence and nomenclature of plant pigments.









**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem III- 2023-24 Total Marks: -20

Paper III (Polymer Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S.J. Kene

Sr. No	Roll No.		Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		Ku	AMOL SHALIKRAM DHANKAR	10	05	04	19
2		Ku	CHAITANYA CHINTAMAN KOHAPARE	10	05	04	19
3			DIPALI NARENDRA DUDHE	10	05	05	20
4			GULSHAN NILESH GOLHAR	10	05	05	20
5			KANCHAN PRABHA SANTOSH	10	05	05	20
6			PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7		Ku	SAKSHI SHIVAJI MOHITE	10	05	05	20
8		Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9		Ku	SANA SAGIR KHAN	10	05	05	20
10		Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11		Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12		Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13		Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	04	05	19
14		Ku	VASUKI SURESH DABHANE	10	05	04	19
15		Ku	VISHAKHA SANJAY MISAL	10	05	04	20



*SJK*  
Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.

*Slony*





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : THIRD SEMESTER M.Sc. (CHEMISTRY) (CBCS)

Subject Name : POLYMER CHEMISTRY

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	263218	20191015400852	AMOL SHALIKRAM DHANKAR	19
2	263219	20201000114883	CHAITANYA CHINTAMAN KOHAPARE	19
3	263220	20201070115365	DIPALI NARENDRA DUDHE	20
4	263221	20201000114892	GULSHAN NILESH GOLHAR	20
5	263222	20201010012674	KANCHAN PRABHA SANTOSH KUMAR SINGH	20
6	263223	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
7	263224	695693060440	SAKSHI SHIVAJI MOHITE	20
8	263225	20201011607489	SAKSHI VIJAY KOTHE	20
9	263226	20201010012801	SANA SAGIR KHAN	20
10	263227	20201055210641	SEJAL MAHENDRA BHARNE	20
11	263228	20201010012809	SEJAL SANJAY BULKUNDE	20
12	263229	20201000114851	TULIKA TAPASH BANERJEE	20
13	263230	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	19
14	263231	20201010012875	VASUKI SURESH DABHANE	19
15	263232	20201011607589	VISHAKHA SANJAY MISAL	20
16	263246	2021016600684074	SANIYA AMINBEG MIRZA	18
17	263247	2021016600566013	SWASTIK SANJAY NANDANWAR	18
18	263248	2021016600544725	VISHAL RAJKUMAR KHARCHWAL	18

*Signature*

Signature of  
Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem III

Theory (Polymer Chemistry)

Session :2023-24

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1) Write the note on polyethylene

Q.2) Describe synthesis and applications of PMMA.

Q.3 Write synthesis and applications of fire retarding polymer.

Q.4 Give detailed about synthesis and application of polyvinyl pyrrolidone.

Skany

Dr. S. J. Kene



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department of Chemistry**

**M.Sc. Chemistry Sem III**

**Theory (Polymer Chemistry)**

**Session :2023-24**

**Date: 08/09/2024**

**Assignment**

**Total Marks -20**

**All questions are compulsory and Each question carry 5 mark.**

Q.1) Give in Details Classification of Polymerization.

Q.2) Write synthesis and applications of fire retarding polymer.

Q.3) Give detailed about synthesis and application of polyvinyl pyrrolidone.

Q.4) Write the note on polyethylene .

*S. Cony*



Class:- MSc Chemistry III Sem(II Year)  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- Dr. S.J. Kene

(polymer chemistry)

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	%
			Date	18/08	19/08	25/08	26/08	1/09	8/09	11/09	12/09	18/09	19/09	25/09	26/09	2/10	3/10	9/10	10/10	16/10	17/10	23/10	27/10	
1	Ku	AMOL SHALIKRAM DHANKAR		P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	13	90%
2		CHAITANYA CHINTAMAN KOHAPARE		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	16	84%
3	Ku	DIPALI NARENDRA DUDHE		P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	17	89%
4	Ku	GULSHAN NILESH GOLHAR		P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	94%
5	Ku	KANCHAN PRABHA SANTOSH		P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	94%
6	Ku	PRAKARSHA OMPRAKASH KHADSE		P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	17	89%
7	Ku	SAKSHI SHIVAJI MOHITE		P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	18	94%
8	Ku	SAKSHI VIJAY KOTHI		P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	17	89%
9	Ku	SANA SAGIR KHAN		P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	16	84%
10	Ku	SEJAL MAHENDRA BHARNE		P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	18	94%
11	Ku	SEJAL SANJAY BULKUNDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	16	84%
12	Ku	TULIKA TAPASH BANERJEE		P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	18	94%
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE		P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	16	84%
14	Ku	VASUKI SURESH DABHANE		P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	16	84%
15	Ku	VISHAKHA SANJAY MISAL		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	18	94%

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Dr. S.J. Kene



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem III- 2023-24 Total Marks: -20

Paper IV (Spectroscopy-I)

Unit Test No- 1 &2 Mark list

Teacher Name: Ms. Shivani Rajesh Sharma

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	05	04	19
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH	10	05	05	20
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	05	20
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	04	05	19
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	04	20

*Shivani*



*Shivani*

Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet


Exam Name : THIRD SEMESTER M.Sc. (CHEMISTRY) (CBCS)

Subject Name : SPECIAL-I: ORGANIC CHEMISTRY

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : Winter-2023

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	263218	20191015400852	AMOL SHALIKRAM DHANKAR	19
2	263219	20201000114883	CHAITANYA CHINTAMAN KOHAPARE	19
3	263220	20201070115365	DIPALI NARENDRA DUDHE	20
4	263221	20201000114892	GULSHAN NILESH GOLHAR	20
5	263222	20201010012674	KANCHAN PRABHA SANTOSH KUMAR SINGH	20
6	263223	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
7	263224	695693060440	SAKSHI SHIVAJI MOHITE	20
8	263225	20201011607489	SAKSHI VIJAY KOTHE	20
9	263226	20201010012801	SANA SAGIR KHAN	20
10	263227	20201055210641	SEJAL MAHENDRA BHARNE	20
11	263228	20201010012809	SEJAL SANJAY BULKUNDE	20
12	263229	20201000114851	TULIKA TAPASH BANERJEE	20
13	263230	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	19
14	263231	20201010012875	VASUKI SURESH DABHANE	19
15	263232	20201011607589	VISHAKHA SANJAY MISAL	20
16	263245	2021016600725815	NISHANT BHOJRAJ DHOBAL	17
17	263247	2021016600566013	SWASTIK SANJAY NANDANWAR	17

  
Signature of  
Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (Spectroscopy - I)

Session : 2023-24

Unit Test

Total Mark's -20

**Attempt Any 4**

Q. 1) Derive character table for  $C_{3v}$  point group on the basis of Great Orthogonality Theorem

Q.2) Identify the symmetry elements and point group of  $CH_4$ . If hydrogen atoms in this molecule are substituted with chlorine atoms one by one, determine point groups of all the resulting molecules.

Q.3) Identify the point groups of (i)  $XeOF_4$  (ii) pyrrole (iii) 1-naphthol (iv) boric acid (v) benzene.

Q.4) Explain the terms : (i) Metastable ion (ii) McLafferty rearrangement.

Q.5) Calculate the moment of inertia of a diatomic molecule whose bond length is 150 pm and reduced mass is  $1.5 \times 10^{-27}$  kg.

~~Shivani R. Shasrma~~  
Shivani R. Shasrma



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem III**

**Theory (Spectroscopy-I)**

**Session :2023-24**

**Assignment**

**Total Marks: 20**

Q.1. Write down character table for H<sub>2</sub>O and NH<sub>3</sub> on the basis of Great Orthogonality Theorem.

Q.2. What is McLafferty rearrangement? Explain it with suitable example.

Q.3. Classify the molecules on the basis of Moment Of Inertia, rigid and non-rigid rotor.

Q.4. Derive the expression for molecules as harmonic oscillator.

Q.5. What is Raman Scattering? Explain Stoke's, Antistoke's and Rayleigh line.



Class :- MSc Chemistry III Sem  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- Shivani R. Sharma  
Spectroscopy - I

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
			Date	25/08/23	26/08/23	01/09/23	02/09/23	03/09/23	04/09/23	05/09/23	06/09/23	07/09/23	08/09/23	09/09/23	10/09/23	11/09/23	12/09/23	13/09/23	14/09/23	15/09/23	16/09/23	17/09/23	18/09/23	19/09/23
1		Amol Shaligram Dhankar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
2		Chaitanya Chintaman Kohapare		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
3	Ku	Dipali Narendra Dudhe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
4		Gulshan Nilesh Golhar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
5	Ku	Kanchan Prabha Singh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
6	Ku	Prakarsha Omprakash Khadse		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
7	Ku	Sakshi Shivaji Mohite		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
8	Ku	Sakshi Vijay Kothe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
9	Ku	Sana Sagir Khan		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
10	Ku	Sejal Mahendra Bharne		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
11	Ku	Sejal Sanjay Bulkunde.		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
12	Ku	Tulika Tapash Banejee		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	75%
13	Ku	Vaishnavi Chute		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	80%
14	Ku	Vasuki Suresh Dabhane		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
15	Ku	Vishakha Sanjay Misal		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%

%  
Attendance

*Shivani R. Sharma*



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem IV- 2023-24 Total Marks: -20


Paper I (Organic Chemistry Sp.-I)

Unit Test No- 1 & 2 Mark list

Teacher Name: Suknya Mishra

Sr. No	Roll	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	05	04	19
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH	10	05	05	20
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	04	19
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	05	04	19
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	05	20



  
Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FOURTH SEMESTER M.Sc. (CHEMISTRY) (CBCS)  
Subject Name : ORGANIC CHEMISTRY-I  
College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE  
Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	380876	20201070115365	DIPALI NARENDRA DUDHE	20
2	380877	20201010012674	KANCHAN PRABHASANTOSH KUMAR S	20
3	380878	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
4	380879	695693060440	SAKSHI SHIVAJI MOHITE	19
5	380880	20201011607489	SAKSHI VIJAY KOTHE	20
6	380881	20201055210641	SEJAL MAHENDRA BHARNE	20
7	380882	20201010012809	SEJAL SANJAY BULKUNDE	20
8	380883	20201000114851	LULIKA TAPASHI BANERJEE	20
9	380884	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	19
10	380885	20201010012875	VASU KJ SURESH DABHANE	19
11	380886	20201011607589	VISHAKHA SANJAY MISAL	20
12	380887	20191015400852	AMOL SHAHKRAM DHANKAR	19
13	380888	20201000114883	CHAITANYA CHINTAMAN KOHAPARE	19
14	380889	20201000114892	GULSHAN NILESH GOLHAR	20
15	380890	20201010012801	SANA SAGIR KHAN	20
16	380897	2021016600687641	SAKSHI ANAND NAGDEVE	--
17	380898	2021016600566013	SWASTIK SANJAY NANDANWAR	--
18	380899	2021016600544725	VISHAL RAJKUMAR KHARCHWAL	--



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special I – organic)

Session :2023-24

Unit Test

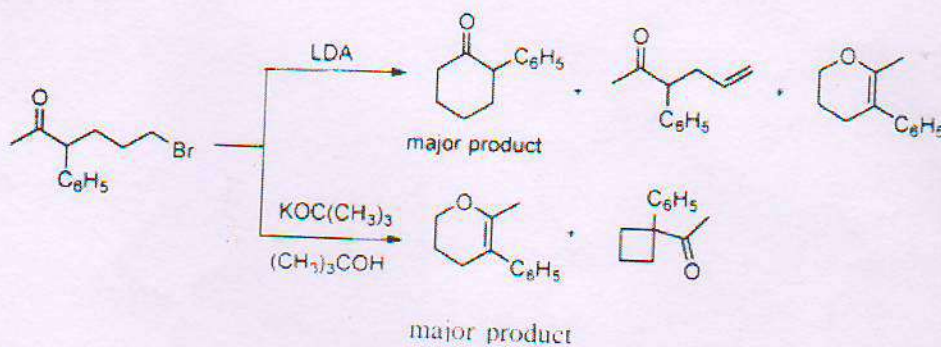
Total Mark's -20

Teacher's Name : Sukanya B. mishra

Time :-1 hr 5 marks each

- N.B. :- (1) All questions are compulsory.  
(2) All questions carry equal marks.

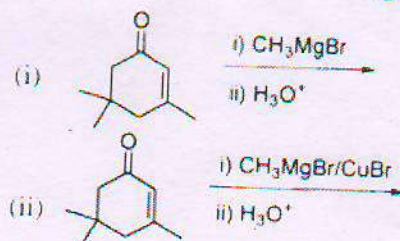
1. (a) Draw stepwise mechanism illustrating how each product is formed.



(b) How would you prepare the following compounds using either an acetoacetic ester synthesis or a malonic ester synthesis?



(c) Predict the product of following reactions (No mechanism).



*Sukanya B. Mishra*  
Sukanya B. Mishra



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem IV**

**Theory (special I – organic)**

**Session :2023-24**

**Assignment**

**Teacher's Name**

**: Sukanya B. mishra**

Solve the following.

- 1) Explain stereochemical concepts enantiomers diastereomers, homotopic ligands.
- 2) Discuss Re-si face concepts.
- 3) Explain Felkin-Anh rule and Houk model.
- 4) Explain asymmetric synthesis use of chiral auxiliaries, asymmetric hydrogenation.
- 5) Explain asymmetric epoxidation and asymmetric dihydroxylation.
- 6) Explain disconnection approach- an introduction to synthons.
- 7) Discuss the protection and deprotection of functional group.
- 8) Discuss the confirmation of sugars.
- 9) Explain Cram's chelate model.
- 10) Discuss stereoselective addition of nucleophiles to carbonyl group.





Class :- MSc Chemistry IV Sem(II Year)  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- Sukanya B. Mishra  
Special I

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Attendance
			Date	14/02/24	15/02/24	16/02/24	17/02/24	20/02/24	21/02/24	22/02/24	23/02/24	24/02/24	26/02/24	27/02/24	28/02/24	29/02/24	04/03/24	05/03/24	09/03/24	11/03/24	12/03/24	13/03/24	14/03/24	
1		Ku AMOL SHALIKRAM DHANKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
2		CHAITANYA CHINTAMAN KOHAPARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
3		Ku DIPALI NARENDRA DUDHE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
4		Ku GULSHAN NILESH GOLHAR		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	85%
5		Ku KANCHAN PRABHA SANTOSH		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	95%
6		Ku PRAKARSHA OMPRAKASH KHADSE		P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	90%
7		Ku SAKSHI SHIVAJI MOHITE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
8		Ku SAKSHI VIJAY KOTHE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
9		Ku SANA SAGIR KHAN		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
10		Ku SEJAL MAHENDRA BHARNE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
11		Ku SEJAL SANJAY BULKUNDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
12		Ku TULIKA TAPASH BANERJEE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
13		Ku VAISHNAVI CHANDRAKUMAR CHUTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
14		Ku VASUKI SURESH DABHANE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
15		Ku VISHAKHA SANJAY MISAL		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%

  
Sukanya B. Mishra



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem IV- 2023-24 Total Marks: -20

Paper I (Organic Chemistry Sp.-II)

Unit Test No- 1 &2 Mark list

Teacher Name: Megha Tabhane

Sr. No	Roll	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	04	04	18
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH	10	05	05	20
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	05	20
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	05	04	19
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	05	20



Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College,  
Congress Nagar, Nagpur.





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FOURTH SEMESTER M.Sc. (CHEMISTRY) (CBCS)

Subject Name : ORGANIC CHEMISTRY-II

College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE

Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	380876	20201070115365	DIPALI NARENDRA DUDHE	20
2	380877	20201010012674	KANCHAN PRABHA SANTOSH KUMAR S	20
3	380878	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
4	380879	695693060440	SAKSHI SHIVAJI MOHITE	20
5	380880	20201011607489	SAKSHI VIJAY KOTHE	20
6	380881	20201055210641	SEJAL MAHENDRA BIHARNE	20
7	380882	20201010012809	SEJAL SANJAY BULKUNDE	20
8	380883	20201000114851	TULIKA TAPASHI BANERJEE	20
9	380884	20201007713337	VAISHNAVI CHANDRAKUMAR CHITTE	19
10	380885	20201010012875	VASUKI SURESH DABHANE	19
11	380886	20201011607589	VISHAKHA SANJAY MISAL	20
12	380887	20191015400852	AMOL SHAIKRAM DHANKAR	19
13	380888	20201000114883	CHAITANYA CHINJAMAN KOHAPARE	18
14	380889	20201000114892	GULSHAN NILESH GOLHAR	20
15	380890	20201010012801	SANA SAGIR KHAN	20
16	380896	2021016600542846	SADNYA ARUN BHADANG	--
17	380897	2021016600687641	SAKSHI ANAND NAGDEVE	--
18	380898	2021016600566013	SWASTIK SANJAY NANDANWAR	--



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special II – organic)

Session :2023-24

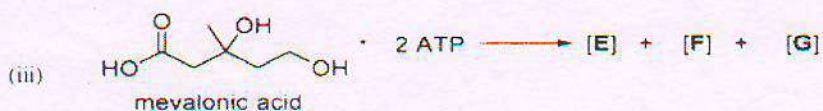
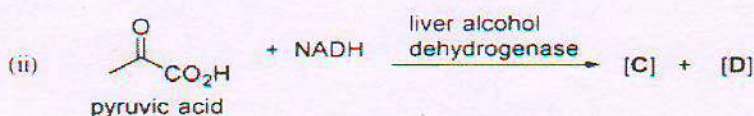
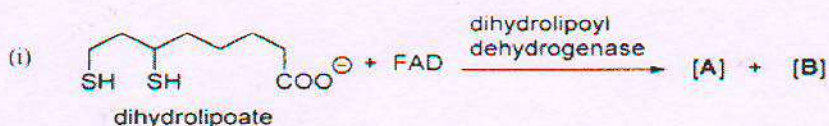
Unit Test

Total Mark's -20

Teacher's Name : Sukanya B. mishra

Time :-1 hr 5 marks each

1) Predict the product of the following reactions;

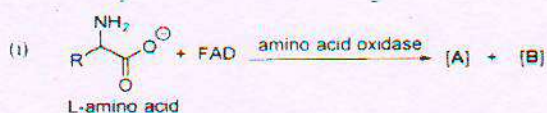


(c) Predict the product(s) of the following reactions. Write the structures of amino acid residues present in chymotrypsin and carboxypeptidase A responsible for enzyme catalysis :




5

3) predict the product of the following reactions



4) explain classification of enzymes with examples. What is enzymes?

  
Sukanya B. Mishra



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem IV**

**Theory (special II – organic)**

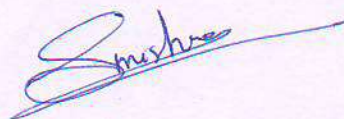
**Session :2023-24**

**Assignment**

**Teacher's Name : Sukanya B. mishra**

**Solve the following.**

- 1) Explain glycerophospholipids and sphingophospholipids in detail.
- 2) Discuss structure and function of triglycerols.
- 3) What are lipoproteins? Explain their composition and function.
- 4) Explain structure and determination of vitamins.
- 5) Give the synthesis of vitamin A.
- 6) Explain in brief the synthesis of vitamin E.
- 7) Discuss the fluid mosaic model of membrane.
- 8) Explain the synthesis of vitamin H.
- 9) What are dyes? Explain their classification in detail.
- 10) Discuss Ziegler-Natta polymerization with mechanism.









**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem IV- 2023-24 Total Marks: -20

Paper III (Polymer Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S.J. Kene

Sr. No	Roll No.	Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1		AMOL SHALIKRAM DHANKAR	10	05	04	19
2		CHAITANYA CHINTAMAN KOHAPARE	10	05	03	18
3	Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4		GULSHAN NILESH GOLHAR	10	05	05	20
5	Ku	KANCHAN PRABHA SANTOSH	10	05	04	19
6	Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7	Ku	SAKSHI SHIVAJI MOHITE	10	05	04	19
8	Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9	Ku	SANA SAGIR KHAN	10	05	05	20
10	Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11	Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12	Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13	Ku	VAISHNAVI CHANDRAKUMAR CHUTE	10	05	05	20
14	Ku	VASUKI SURESH DABHANE	10	05	04	19
15	Ku	VISHAKHA SANJAY MISAL	10	05	05	20



Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.

*S. J. Kene*



RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FOURTH SEMESTER M.Sc. (CHEMISTRY) (CBCS)  
Subject Name : ELECTIVE : POLYMER CHEMISTRY  
College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE  
Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max
1	380876	20201070115365	DIPALI NARENDRA DUDHE	20
2	380877	20201010012674	KANCHAN PRABHA SANTOSH KUMAR S	19
3	380878	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
4	380879	695693060440	SAKSHI SHIVAJI MOHITE	19
5	380880	20201011607489	SAKSHI VILAY KOTHE	20
6	380881	20201055210641	SEJAL MAHENDRA BIHARNE	20
7	380882	20201010012809	SEJAL SANJAY BULKUNDE	20
8	380883	20201000114851	TULIKA TAPASH BANERJEE	20
9	380884	20201007713337	VAISHNAVI CHANDRAKUMAR CHITTE	20
10	380885	20201010012875	VASUKI SURESH DABHANE	19
11	380886	20201011607589	VISHAKHA SANJAY MISAL	20
12	380887	20191015400852	AMOL SHAI IKRAM DHANKAR	19
13	380888	20201000114883	CHAITANYA CHINTAMAN KOLIAPARI	18
14	380889	20201000114892	GULSHAN NILESH GOLHAR	20
15	380890	20201010012801	SANA SAGIR KHAN	20
16	380898	2021016600566013	SWASTIK SANJAY NANDANWAR	--
17	380899	2021016600544725	VISHAL RAJKUMAR KHARCHIWAL	--

Skany  
Signature of Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem IV

Theory (Polymer Chemistry)

Session :2023-24

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

Q.1) Discuss in details any one method for the synthesis of Block copolymer.

Q.2) What are silicones? Explain the synthesis of straight chain and cross-linked silicones.

Q.3 Explain the application of biomedical polymers in artificial heart and skin.

Q.4 Write the synthesis of poly(organo phosphazenes) and give its applications.

Sony

Dr. S. J. Kone



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department of Chemistry**

**M.Sc. Chemistry Sem IV**

**Theory (Polymer Chemistry)**

**Session :2023-24**

**Date: 17/02/2024**

**Assignment**

**Total Marks -20**

**All questions are compulsory and Each question carry 5 mark.**

Q.1) What is Ziegler Natta Catalyst. Discuss the Natta monometallic mechanism in details.

Q.2 Give details account of interfacial polymerization.

Q.3) write the salient features of Emulsion polymerization.

Q.4 write a note on Bulk polymerization

Stem



IV

Class :- MSc Chemistry III Sem

Science College, Congress Nagar, Nagpur.

Name of Teacher :- Dr. S. J. Kene

Theory / Practical (Polymer Chemistry)

2023-2024

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total	%
			Date	31/01/24	02/02/24	03/02/24	07/02/24	09/02/24	10/02/24	14/02/24	15/02/24	17/02/24	21/02/24	22/02/24	23/02/24	28/02/24	01/03/24	05/03/24	09/03/24	15/03/24	16/03/24	22/03/24	23/03/24		
1		Amol Shaligram Dhankar		P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	16	80
2		Chaitanya Chintaman Kohapare		P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	18	90
3	Ku	Dipali Narendra Dudhe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
4		Gulshan Nilesh Golhar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	19	95
5	Ku	Kanchan Prabha Singh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	19	95
6	Ku	Prakarsha Omprakash Khadse		A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
7	Ku	Sakshi Shivaji Mohite		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
8	Ku	Sakshi Vijay Kothe		P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
9	Ku	Sana Sagir Khan		P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
10	Ku	Sejal Mahendra Bharne		P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	17	85
11	Ku	Sejal Sanjay Bulkunde.		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
12	Ku	Tulika Tapash Banejee		A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16	80
13	Ku	Vaishnavi Chute		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
14	Ku	Vasuki Suresh Dabhane		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90
15	Ku	Vishakha Sanjay Misal		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	18	90

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unit  
Test  
(I)

Skany

Dr. S. J. Kene



**SSES Amravati's Science College, Congress Nagar Nagpur**  
**Department of Chemistry**

M.Sc Sem IV- 2023-24 Total Marks: -20

Paper IV (Spectroscopy-II)

Unit Test No- 1 &2 Mark list

Teacher Name: Shivani Sharma

Sr. No	Roll No.		Students Full Name	Unit Test (10)	Assignment (05)	Attendance (05)	Total (20)
1			AMOL SHALIKRAM DHANKAR	10	05	04	19
2			CHAITANYA CHINTAMAN KOHAPARE	10	05	03	18
3		Ku	DIPALI NARENDRA DUDHE	10	05	05	20
4			GULSHAN NILESH GOLHAR	10	05	05	20
5		Ku	KANCHAN PRABHA	10	05	05	20
6		Ku	PRAKARSHA OMPRAKASH KHADSE	10	05	04	19
7		Ku	SAKSHI SHIVAJI MOHITE	10	05	05	20
8		Ku	SAKSHI VIJAY KOTHE	10	05	05	20
9		Ku	SANA SAGIR KHAN	10	05	05	20
10		Ku	SEJAL MAHENDRA BHARNE	10	05	05	20
11		Ku	SEJAL SANJAY BULKUNDE	10	05	05	20
12		Ku	TULIKA TAPASH BANERJEE	10	05	05	20
13		Ku	VAISHNAVI CHANDRAKUMAR CHITTE	10	05	05	20
14		Ku	VASUKI SURESH DABHANE	10	05	04	19
15		Ku	VISHAKHA SANJAY MISAL	10	05	05	20

*Shivani Sharma*



*Shivani Sharma*

Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.





RASHTRASAT TUKADOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR

Internal Marks Sheet

Exam Name : FOURTH SEMESTER M.Sc. (CHEMISTRY) (CBCS)  
Subject Name : CORE SUBJECT CENTRIC : SPECTROSCOPY-II  
College Name : (100) SHRI SHIVAJI SCIENCE COLLEGE  
Session : SUMMER-2024

Sr. No.	SEAT NO	ENROLLMENT NO	STUDENT NAME	Marks / Max 20
1	380876	20201070115365	DIPALI NARENDRA DUDHE	20
2	380877	20201010012674	KANCLAN PRABHA SANJOSH KUMAR S	20
3	380878	20201007512139	PRAKARSHA OMPRAKASH KHADSE	19
4	380879	695693060440	SAKSHI SHIVAJI MOHITE	20
5	380880	20201011607489	SAKSHI VIDYAY KOTHE	20
6	380881	20201055210641	SEJAL MAHENDRA BHARNE	20
7	380882	20201010012809	SEJAL SANJAY BULKUNDE	20
8	380883	20201000114851	TULIKA TAPASH BANERJEE	20
9	380884	20201007713337	VAISHNAVI CHANDRAKUMAR CHUTE	20
10	380885	20201010012875	VASUKI SURESH DABHANE	19
11	380886	20201011607589	VISHAKHA SANJAY MISAL	20
12	380887	20191015400852	AMOL SHALIKRAM DHANKAR	19
13	380888	20201000114883	CHAITANYA CHINAMAN KOTAPARI	18
14	380889	20201000114892	GULSHAN NILESH GOLHAR	20
15	380890	20201010012801	SANA SAGIR KHAN	20
16	380896	2021016600542846	SADNYA ARUN BHADANG	--
17	380897	2021016600687641	SAKSHI ANAND NAGDEVE	--
18	380899	2021016600544725	VISHAL RAJKUMAR KHARCHWAL	--

S/Carth  
Signature of Examiner



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (Spectroscopy - II)

Session : 2022-23

Unit Test

Total Mark's -20

**Attempt any 4**

Q.1) Define the following terms:


- i) Bathochromic Shift
- ii) Hypsochromic Shift
- iii) Chromophore
- iv) Hyperchromic Shift

Q.2) State and Explain Beer-Lambert's Law

Q.3) How structure factor is related to electron density in XRD.

Q.4) Discuss the Scattering angle vs Scattering intensity of electron diffraction.

Q.5) Write short notes on Wierl Equation.

  
Shivani R. Sharma



**SSES Amt's Science College, Congress Nagar, Nagpur**

**Department Of Chemistry**

**M.Sc. Chemistry Sem IV**

**Theory (Spectroscopy-II)**

**Session :2023-24**

**Assignment**

**Total Marks: 20**

Q.1. What is Frank-Condon principle. Describe various electronic transitions.

Q.2. Answer the following questions

- (I) What is the relationship between chemical shift in ppm and operating frequency ?
- (II) What is the relationship between chemical shift in hertz and operating frequency ?
- (III) What is the relationship between coupling constant and operating frequency ?
- (IV) How does the operating frequency in NMR spectroscopy compare with the operating frequency in IR and UV/Vis spectroscopy ?

Q.3. Determine the structure of a compound using following data:

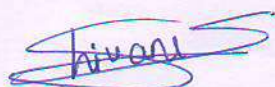
Molecular formula :  $C_7H_{16}O$

IR ( $cm^{-1}$ ): 3200-3600 (broad), 2950

$^1H$  NMR :  $\delta$  2.8 (1H, broad, s), 1.0 (6H, s), 0.9 (9H, s)

$^{13}C$  NMR :  $\delta$  68 (s), 39 (s), 16 (q), 13 (q)

Q.4. The X-ray diffraction pattern of Silver, known to crystallize in the cubic system, was found using X-rays with wave length 154.1 pm. The first six lines occurred at the following angles:  $19.08^\circ$ ,  $22.17^\circ$ ,  $32.26^\circ$ ,  $38.74^\circ$ ,  $40.82^\circ$  and  $49.00^\circ$





Class :- MSc Chemistry IV Sem  
Theory / Practical

Science College, Congress Nagar, Nagpur.  
2023-2024

Name of Teacher :- Shivani R. Sharma  
Spectroscopy-II

Sr. No	Roll	Students Full Name	Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
			Date																					
1		Amol Shalikram Dhankar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2		Chaitanya Chintaman Kohapare		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	Ku	Dipali Narendra Dudhe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4		Gulshan Nilesh Golhar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	Ku	Kanchan Prabha Singh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	Ku	Prakarsha Omprakash Khadse		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	Ku	Sakshi Shivaji Mohite		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	Ku	Sakshi Vijay Kothe		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	Ku	Sana Sagir Khan		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Ku	Sejal Mahendra Bharne		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Ku	Sejal Sanjay Bulkunde.		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Ku	Tulika Tapash Banejee		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Ku	Vaishnavi Chute		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	Ku	Vasuki Suresh Dabhane		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	Ku	Vishakha Sanjay Misal		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Unit test  
attendance




SSES Amravati's Science Collge, Congress Nagar, Nagpur

Department of Chemistry

Internal Assessment Record-PG- (CIE)-2023-24

Class	Paper	Teacher Name	Sign
Sem-I	Paper-I	S. S. Dhok	
	Paper-II	Shivani R. Sharma	
	Paper-III	Dr. Shubhangi Kere	
	Paper-IV	Dr. S. J. Kere	
Sem-II	Paper-I	Megha Tabhane	
	Paper-II	Dr. S. J. Kere	
	Paper-III	Shivani R. Sharma	
	Paper-IV	-	-
Sem-III	Paper-I	Megha Tabhane	
	Paper-II	Sukanya B. Mishra	
	Paper-III	Dr. S. J. Kere	
	Paper-IV	Shivani R. Sharma	
Sem-IV	Paper-I	Sukanya B. Mishra	
	Paper-II	Sukanya B. Mishra	
	Paper-III	Dr. S. J. Kere	
	Paper-IV	Shivani R. Sharma	



  
 Professor & Head  
 Department of Chemistry,  
 Shri Shivaji Science College  
 Congress Nagar, Nagpur