

SSES Amravati's Science Collge, Congress Nagar, Nagpur

Department of Chemistry

Internal Assessment Record-PG- (CIE)-2020-21

Class	Paper	Teacher Name	Sign
Sem-I	Paper-I	Preerna Kotecha	Preerna
	Paper-II	Dr. V. R. Kinhikar	Dr. V. R. Kinhikar
	Paper-III	Shivani R. Sharma	Shivani
	Paper-IV	Dr. S. J. Kene	Skene
Sem-II	Paper-I	Pramod Bhojraj	Pramod
	Paper-II	Preerna Kotecha	Preerna
	Paper-III	Shivani R. Sharma	Shivani
	Paper-IV	Dr. S. J. Kene	Skene
Sem-III	Paper-I	Preerna Kotecha	Preerna
	Paper-II	Dr. S. J. Kene	Skene
	Paper-III	Dr. S. J. Kene	Skene
	Paper-IV	Shivani R. Sharma	Shivani
Sem-IV	Paper-I	Pramod Bhojraj	Pramod
	Paper-II	Preerna Kotecha	Preerna
	Paper-III	Dr. S. J. Kene	Skene
	Paper-IV	Shivani R. Sharma	Shivani




 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- 2020-21 Total Marks: -20

Paper I (Inorganic Chemistry-I)

Unit Test No- 1 & 2 Mark list

Teacher Name:Prerna Kotecha

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	5	5	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	5	5	20
3		Ku	ASHWINI NANAKRAM BITLE	10	5	5	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	5	5	20
5		Ku	BABITA RAMDAS KAKDE	10	5	5	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	5	5	20
7			BHAVESH KISAN NEWARE	10	5	5	20
8		Ku	CHANDNI KISHOR CHOUDHRY	10	5	5	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	5	5	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	5	5	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	5	5	20
12			DURGESH RAMESH ADMACHI	10	5	5	20
13		Ku	GOURI ANILRAO BHOSLE	5	5	5	15
14		Ku	KIRTI CHAITRAM BODE	10	5	5	20
15			MOHIT KISHOR KHEDIKAR	8	5	5	18
16			NIKHIL RAMCHANDRA TONGE	10	5	5	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	9	5	5	19
18		Ku	PRAGATI BHOLESWAR TAPASE	10	5	5	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	5	5	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	5	5	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	5	5	20
22		Ku	RUTUJA SHYAM POTKAR	10	5	5	20
23		Ku	SAVITRI NARVADAPRASAD SONDHIA	10	5	5	20
24		Ku	SONALI SUNIL BORKAR	10	5	5	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	8	5	5	18
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	5	5	20
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	5	5	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: FIRST SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: INORGANIC CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	789066	20181025114476	ADITI SHASHIKANT AWALE	20
2	789067	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	789068	20181042402456	ASHWINI NANAKRAM BITLE	20
4	789069	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	789070	20181010703591	BABITA RAMDAS KAKDE	20
6	789071	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	789072	20181045912921	BHAVESH KISAN NEWARE	20
8	789073	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	789074	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	789075	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	789076	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	789077	2015016600741486	DURGESH RAMESH ADMACHI	20
13	789078	20181011312369	GOURI ANILRAO BHOSLE	15
14	789079	20181033285596	KIRTI CHAITRAM BODE	20
15	789080	20181011312688	MOHIT KISHOR KHEDIKAR	18
16	789081	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	789082	20181011312698	PARISHRAM JAGDISH GAJBHIYE	19
18	789083	--	PRAGATI BHOLESHWAR TAPASE	20
19	789084	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	789085	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	789086	20181011312512	RUCHITA DRYANESHWAR GECHODE	20
22	789087	20181011312520	RUTUJA SHYAM POTKAR	20
23	789088	20181010703702	SAVITRI NARVADAPRASAD SONDIYA	20
24	789089	20181000106956	SONALI SUNIL BORKAR	20
25	789090	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	18
26	789091	20181015803341	SUSHMA VILAS KSHIRSAGAR	20
27	789092	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Signature Of Examiner

Dr. S.J. Kene

Print Date & Time: 12-05-2021 07:07 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Inorganic Chemistry)

Session :2020-21

Unit Test

Total Mark's -20

Attempt Any 4

Q.1. What are the basic assumptions of VSEPR theory? Using it, explain how the multiple bonds and back p-bonding affects the stereochemistry of molecules. Give one example of each. 5

Q.2 How does VSEPR theory fail to explain the shape of the following molecules ?

(i) CaF_2

(ii) XeF_6

(iii) $[\text{NiCl}_4]^{2-}$

5

Q.3. What is annation reaction ? Explain its mechanism with suitable example. 5

Q.4 Discuss the mechanism of substitution reaction without breaking metal-ligand bond. 5

Q.5. What is conjugate base mechanism ? Explain with suitable example. 5

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Inorganic Chemistry)

Session :2020-21

Assignment

Q.1. What are carboranes ? How are they classified ? Describe synthesis of carborane using acetylene.

Q.2. Discuss structure and bonding in Pentaborane-9.

Q.3. 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

Q.4. Give different synthetic routes for synthesis of higher boranes by pyrolysis method.

Q.5. Discuss structure and bonding in hexanuclear halide metal clusters of Mo and Nb.

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

M.Sc Sem I- 2020-21 Total Marks: -20

Paper II(Organic Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name:Dr. V.R. Kinhikar

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	5	5	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	5	5	20
3		Ku	ASHWINI NANAKRAM BITLE	10	5	5	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	5	5	20
5		Ku	BABITA RAMDAS KAKDE	10	5	5	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	5	5	20
7			BHAVESH KISAN NEWARE	10	5	5	20
8		Ku	CHANDNI KISHOR CHOUDHRY	10	5	5	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	5	5	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	5	5	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	5	5	20
12			DURGESH RAMESH ADMACHI	10	5	5	20
13		Ku	GOURI ANILRAO BHOSLE	8	5	3	16
14		Ku	KIRTI CHAITRAM BODE	10	5	5	20
15			MOHIT KISHOR KHEDIKAR	10	5	3	18
16			NIKHIL RAMCHANDRA TONGE	10	5	5	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	9	5	5	19
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	5	5	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	5	5	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	5	5	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	5	5	20
22		Ku	RUTUJA SHYAM POTKAR	10	5	5	20
23		Ku	SAVITRI NARVADAPRASAD SONDHIIYA	10	5	5	20
24		Ku	SONALI SUNIL BORKAR	10	5	5	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	9	5	4	18
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	5	5	20
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	5	5	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: FIRST SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: ORGANIC CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	789066	20181025114476	ADITI SHASHIKANT AWALE	20
2	789067	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	789068	20181042402456	ASHWINI NANAKRAM BITLE	20
4	789069	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	789070	20181010703591	BABITA RAMDAS KAKDE	20
6	789071	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	789072	20181045912921	BHAVESH KISAN NEWARE	20
8	789073	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	789074	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	789075	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	789076	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	789077	2015016600741486	DURGESH RAMESH ADMACHI	20
13	789078	20181011312369	GOURI ANILRAO BHOSLE	16
14	789079	20181033285596	KIRTI CHAITRAM BODE	20
15	789080	20181011312688	MOHIT KISHOR KHEDIKAR	18
16	789081	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	789082	20181011312698	PARISHRAM JAGDISH GAJBHIYE	19
18	789083	-	PRAGATI BHOLESWAR TAPASE	20
19	789084	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	789085	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	789086	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	789087	20181011312520	RUTUJA SHYAM POTKAR	20
23	789088	20181010703702	SAVITRI NARVADAPRASAD SONDHIA	20
24	789089	20181000106956	SONALI SUNIL BORKAR	20
25	789090	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	18
26	789091	20181015803341	SUSHMA VILAS KSHIRSAGAR	20
27	789092	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Signature Of Examiner

Dz. S. J. Kene skery

Print Date & Time: 12-05-2021 07:14 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (ORGANIC CHEMISTRY)

Session :2020-21

Unit Test

Total Mark's -20

Time :-1 hr

5 marks each

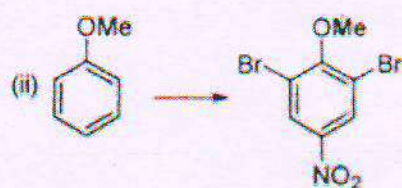
ATTEMPT ANY FOUR

1. explain nature bonding in organic molecule. Explain conjugation with example.

2. draw a qualitative potential energy diagram for rotation about C3-C4 Bond in methyl pentane. show newmann projection for all conformations located at the maximum and minimum points on your graphs .

3. write short note on fullerene.

4. how will you bring following transformations involving more than one step.



5. draw a potential energy diagram for the reaction mechanism with two steps. the first step is fast and second step is slow . the overall reaction is exothermic.

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Organic Chemistry)

Session :2020-21

Assignment

Solve the following.

- 1) Discuss the aromaticity and antiaromaticity with example.
- 2) Explain covalent addition with example.
- 3) Explain reimer tiemer coupling reaction with example.
- 4) Explain generation and structure of reactive intermediates.
- 5) Explain carbocation rearrangements with examples.
- 6) Discuss sommett hauser and smiles rearrangement.
- 7) Explain Friedel crafts reaction with example.
- 8) Discuss vilsmeier haack reaction with example.
- 9) Describe Gattermann Koch reaction with example.
- 10) Discuss pechman reaction with example.

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

M.Sc Sem I- 2020-21 Total Marks: -20

Paper III (Physical Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Shivani Sharma

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	5	5	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	5	5	20
3		Ku	ASHWINI NANAKRAM BITLE	10	5	5	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	5	5	20
5		Ku	BABITA RAMDAS KAKDE	10	5	5	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	5	5	20
7			BHAVESH KISAN NEWARE	10	5	5	20
8		Ku	CHANDNI KISHOR CHOUDHRY	10	5	5	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	5	5	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	5	5	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	5	5	20
12			DURGESH RAMESH ADMACHI	10	5	5	20
13		Ku	GOURI ANILRAO BHOSLE	7	4	5	16
14		Ku	KIRTI CHAITRAM BODE	10	5	5	20
15			MOHIT KISHOR KHEDIKAR	9	5	5	19
16			NIKHIL RAMCHANDRA TONGE	10	5	5	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	9	5	5	19
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	5	5	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	5	5	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	5	5	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	5	5	20
22		Ku	RUTUJA SHYAM POTKAR	10	5	5	20
23		Ku	SAVITRI NARVADAPRASAD SONDDHIYA	10	5	5	20
24		Ku	SONALI SUNIL BORKAR	10	5	5	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	9	5	5	19
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	5	5	20
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	5	5	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: FIRST SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: PHYSICAL CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	789066	20181025114476	ADITI SHASHIKANT AWALE	20
2	789067	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	789068	20181042402456	ASHWINI NANAKRAM BITLE	20
4	789069	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	789070	20181010703591	BABITA RAMDAS KAKDE	20
6	789071	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	789072	20181045912921	BHAVESH KISAN NEWARE	20
8	789073	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	789074	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	789075	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	789076	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	789077	2015016600741486	DURGESH RAMESH ADMACHI	20
13	789078	20181011312369	GOURI ANILRAO BHOSLE	15
14	789079	20181033285596	KIRTI CHAITRAM BODE	20
15	789080	20181011312688	MOHIT KISHOR KHEDIKAR	18
16	789081	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	789082	20181011312698	PARISHRAM JAGDISH GAJBHIYE	19
18	789083	-	PRAGATI BHOLESHWAR TAPASE	20
19	789084	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	789085	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	789086	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	789087	20181011312520	RUTUJA SHYAM POTKAR	20
23	789088	20181010703702	SAVITRI NARVADAPRASAD SONDIYA	20
24	789089	20181000106956	SONALI SUNIL BORKAR	20
25	789090	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	18
26	789091	20181015803341	SUSHMA VILAS KSHIRSAGAR	20
27	789092	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Signature Of Examiner

D2. S.J. Kene Sikony

Print Date & Time: 12-05-2021 07:18 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Physical Chemistry)

Session :2020-21

Unit Test

Total Mark's -20

Attempt Any 4

Q.1. List the thermodynamic expressions which constitute the thermodynamic network. From these expressions derive any two Maxwell relations. 5

Q.2. Using Nernst Heat theorem, prove that, "It is impossible by any process, no matter how idealized, to reduce the temperature of any system to absolute zero, in a finite number of operations." 5

Q.3. Write short notes on :—

(i) Residual Entropy

(ii) Nernst Heat Theorem

5

Q.4. What are first and second order phase transitions ? Discuss the phase diagram of Helium system. 5

Q.5. Draw a well labelled phase-diagram of two component solid-liquid equilibria of Ag-Pb system. 5

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem I

Theory (Physical Chemistry)

Session :2020-21

Assignment

- Q.1. Derive the expression for BET adsorption isotherm.
- Q.2. What are surface active agents ? Discuss their different types in detail.
- Q.3. Discuss the molecular weight determination of a polymer using viscometric method.
- Q.4. Derive the expression for determining surface excess concentration of the solute per unit area of the surface.
- Q.5. Derive the integrated form of Arrhenius rate equation.
- Q.6. Discuss the Hinshelwood mechanism suggested for Lindemann unimolecular reaction with the energy profile scheme.
- Q.7. Draw and discuss the phase diagram of sulphur system.
- Q.8. Give the Thermodynamic formulation of Transition State theory.
- Q.9 Calculate the activation energy of a reaction whose rate constant is tripled by a 10°C rise in temperature in the vicinity of 27°C.
- Q.10. Derive Gibbs-Duhem-Mergules equation.

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

M.Sc Sem I- 2020-21 Total Marks: -20

Paper IV (Analytical Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S. J. Kene

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	5	5	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	5	5	20
3		Ku	ASHWINI NANAKRAM BITLE	10	5	5	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	5	5	20
5		Ku	BABITA RAMDAS KAKDE	10	5	5	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	5	5	20
7			BHAVESH KISAN NEWARE	10	5	5	20
8		Ku	CHANDNI KISHOR CHOUDHRY	10	5	5	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	5	5	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	5	5	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	5	5	20
12			DURGESH RAMESH ADMACHI	10	5	5	20
13		Ku	GOURI ANILRAO BHOSLE	8	4	4	16
14		Ku	KIRTI CHAITRAM BODE	10	5	5	20
15			MOHIT KISHOR KHEDIKAR	9	5	5	19
16			NIKHIL RAMCHANDRA TONGE	10	5	5	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	10	5	5	19
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	5	5	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	5	5	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	5	5	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	5	5	20
22		Ku	RUTUJA SHYAM POTKAR	10	5	5	20
23		Ku	SAVITRI NARVADAPRASAD SONDHIA	10	5	5	20
24		Ku	SONALI SUNIL BORKAR	10	5	5	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	10	5	5	19
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	5	5	20
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	5	5	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: FIRST SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: ANALYTICAL CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	789066	20181025114476	ADITI SHASHIKANT AWALE	20
2	789067	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	789068	20181042402456	ASHWINI NANAKRAM BITLE	20
4	789069	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	789070	20181010703591	BABITA RAMDAS KAKDE	20
6	789071	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	789072	20181045912921	BHAVESH KISAN NEWARE	20
8	789073	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	789074	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	789075	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	789076	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	789077	2015016600741486	DURGESH RAMESH ADMACHI	20
13	789078	20181011312369	GOURI ANILRAO BHOSLE	16
14	789079	20181033285596	KIRTI CHAITRAM BODE	20
15	789080	20181011312688	MOHIT KISHOR KHEDIKAR	19
16	789081	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	789082	20181011312698	PARISHRAM JAGDISH GAJBHIYE	19
18	789083	-	PRAGATI BHOLESWAR TAPASE	20
19	789084	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	789085	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	789086	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	789087	20181011312520	RUTUJA SHYAM POTKAR	20
23	789088	20181010703702	SAVITRI NARVADAPRASAD SONDHIIYA	20
24	789089	20181000106956	SONALI SUNIL BORKAR	20
25	789090	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	19
26	789091	20181015803341	SUSHMA VILAS KSHIRSAGAR	20
27	789092	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Signature Of Examiner

Dr. S. J. Kerkar

Sikory

Print Date & Time: 12-05-2021 06:59 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Analytical Chemistry)

Session :2020-21

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (1) The solubility of AgCl in water at 25°C is 1.9 mg/L. Calculate its solubility product. (Mol. Wt of AgCl = 143.5 g/mol)
- (2) Explain the theory of redox indicator and show that an emf change of 0.12 V is necessary to observe rapid colour change at the end point.
- (3) Explain following steps in Gravimetry using suitable example:
 - (i) Digestion
 - (ii) Ash treatment.
- (4) Explain the application of Kohlrausch law in determination of degree of dissociation of weak electrolyte and solubility of sparingly soluble salt.

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem I

Theory (Analytical Chemistry)

Session :2020-21

Date:

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (a) Explain application of MS-Excel in statistical analysis.
- (b) Explain the terms: repeatability, robustness and reproducibility.
- (d) Explain working of (i) glass electrode and (ii) antimony electrode.
- (f) Define 'specific conductance' and 'equivalent conductance'. Explain the effect of dilution on them.

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

M.Sc Sem II- 2020-21 Total Marks: -20

Paper I (Inorganic Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Pramod Bhojar

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	05	05	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	05	05	20
3		Ku	ASHWINI NANAKRAM BITLE	10	05	04	19
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	05	05	20
5		Ku	BABITA RAMDAS KAKDE	10	05	05	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	05	05	20
7			BHAVESH KISAN NEWARE	10	05	04	19
8		Ku	CHANDNI KISHOR CHOUDHRY	10	05	05	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	05	05	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	05	05	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	05	05	20
12			DURGESH RAMESH ADMACHI	10	05	04	19
13		Ku	GOURI ANILRAO BHOSLE	10	04	04	18
14		Ku	KIRTI CHAITRAM BODE	10	05	04	19
15			MOHIT KISHOR KHEDIKAR	07	04	04	15
16			NIKHIL RAMCHANDRA TONGE	10	05	05	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	07	04	04	15
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	05	05	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	05	05	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	05	05	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	05	05	20
22		Ku	RUTUJA SHYAM POTKAR	10	05	05	20
23		Ku	SAVITRI NARVADAPRASAD SONDIYA	10	05	04	19
24		Ku	SONALI SUNIL BORKAR	10	05	05	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	10	04	04	18
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	05	04	19
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	05	04	19

Pramod



[Signature]

Head
Department of Chemistry,
S.S.E.S. Am's Science College
Congress Nagar, Nagpur



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: SECOND SEMESTER (I.S.) (CHEMISTRY) (CBCS) PG

Subject Name: INORGANIC CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	911159	20181025114476	ADITI SHASHIKANT AWALE	20
2	911160	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	911161	20181042402456	ASHWINI NANAKRAM BITLE	19
4	911162	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	911163	20181010703591	BABITA RAMDAS KAKDE	20
6	911164	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAJKWAD	20
7	911165	20181045912921	BHAVESH KISAN NEWARE	19
8	911166	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	911167	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	911168	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	911169	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	911170	2015016600741486	DURGESH RAMESH ADMACHI	19
13	911171	20181011312369	GOURI ANILRAO BROSLE	18
14	911172	20181033285596	KIRTI CHAITRAM BODE	19
15	911173	20181011312688	MOHIT KISHOR KHEDINAR	15
16	911174	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	911175	20181011312698	PARISHRAM JAGDISH GAJPHIYE	15
18	911176		PRAGATI BHOLESHWAR TAPASE	20
19	911177	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	911178	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	911179	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	911180	20181011312520	RUTUJA SHYAM POTKAR	20
23	911181	20181010703702	SAVITRI NARVADAPRASAD SONDIYA	19
24	911182	20181000106956	SONALI SUNIL BORKAR	20
25	911183	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	18
26	911184	20181015803341	SUSHMA VILAS KSHIRSAGAR	19
27	911185	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	19

Score

Signature Of Examiner

Date & Time: 17-09-2021 03:41 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Inorganic Chemistry)

Session :2020-21

Unit Test

Total Mark's -20

Attempt Any 4

- Q.1 Discuss Electronic spectra of the octahedral complexes of d2 and d8 configuration on the basis of Orgel diagram. 5
- Q.2. Discuss high spin-low spin cross over phenomenon in complexes. 5
- Q.3. What are T-S diagrams ? How can T-S diagram be helpful in determining Racah parameters ? Explain. 5
- Q.4. What is meant by L-S coupling ? Using L-S coupling method, derive energy terms for free metal ion with d 2 configuration. 5
- Q.5. Explain correlation between the magnetic moment and structure in tetrahalo cobalt (II) complexes. 5

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Inorganic Chemistry)

Session :2020-21

Assignment

- Q.1. What is trans effect ? Give its synthetic applications. Discuss trans effect on the basis of p-bonding theory.
- Q.2. How does substitution reaction in square planar complexes proceed if water is used as solvent ? Explain its mechanism with suitable example.
- Q.3. What are the conditions for one electron transfer reaction ? Discuss inner sphere mechanism with suitable example.
- Q.4. Write notes on:
- (i) Tunneling Effect
 - (ii) Two electron transfer reaction
- Q.5. Discuss Marcus-Huss theory of electron transfer reaction with suitable example.
- Q.6. Discuss structure and bonding in $\text{Co}_2(\text{CO})_8$ molecule.
- Q.7. What do you mean by synergic bonding in metal carbonyls ? Explain.
- Q.8. What is Vaska's compound ? Discuss its preparation and chemical properties.
- Q.9. Discuss different bonding modes of NO in metal nitrosyls.
- Q.10. What is Wilkinson catalyst ? Explain its utility in synthetic organic chemistry.

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

M.Sc Sem II- 2020-21 Total Marks: -20

Paper II (Organic Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Prerna kotecha

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	05	05	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	05	04	19
3		Ku	ASHWINI NANAKRAM BITLE	10	05	05	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	05	05	20
5		Ku	BABITA RAMDAS KAKDE	10	05	05	20
6		Ku	BHAGYASHRI CHANDRASHEKHAR	10	05	05	20
7			BHAVESH KISAN NEWARE	10	05	04	19
8		Ku	CHANDNI KISHOR CHOUDHRY	10	05	05	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	05	05	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	05	05	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	05	05	20
12			DURGESH RAMESH ADMACHI	10	05	04	19
13		Ku	GOURI ANILRAO BHOSLE	10	04	04	18
14		Ku	KIRTI CHAITRAM BODE	10	05	04	19
15			MOHIT KISHOR KHEDIKAR	08	04	03	15
16			NIKHIL RAMCHANDRA TONGE	10	05	05	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	08	04	03	15
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	05	05	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	05	05	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	05	05	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	05	05	20
22		Ku	RUTUJA SHYAM POTKAR	10	05	05	20
23		Ku	SAVITRI NARVADAPRASAD SONDHIA	10	05	04	19
24		Ku	SONALI SUNIL BORKAR	10	05	05	20
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	10	04	04	18
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	05	04	19
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	05	04	19

Prerna Kotecha




 Head
 Department of Chemistry,
 S.S.E.S. Am's Science College,
 Congress Nagar, Nagpur.

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**<https://www.nagpur.university>**Internal Report**

Exam Name: SECOND SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: ORGANIC CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	911159	20181025114476	ADITI SHASHIKANT AWALE	20
2	911160	20181011312331	APEKSHA NANESHWAR CHOUDHARY	19
3	911161	20181042402456	ASHWINI NANAKRAM BITLE	20
4	911162	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	911163	20181010703591	BABITA RAMDAS KAKDE	20
6	911164	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	911165	20181045912921	BHAVESH KISAN NEWARE	19
8	911166	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	911167	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	911168	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	911169	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	911170	2015016600741486	DURGESH RAMESH ADMACHI	19
13	911171	20181011312369	GOURI ANILRAO BHOSLE	18
14	911172	20181033285596	KIRTI CHAITRAM BODE	19
15	911173	20181011312688	MOHIT KISHOR KHEDIKAR	15
16	911174	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	911175	20181011312698	PARISHRAM JAGDISH GAJBHIYE	15
18	911176	--	PRAGATI BHOLESHWAR TAPASE	20
19	911177	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	911178	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	911179	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	911180	20181011312520	RUTUJA SHYAM POTKAR	20
23	911181	20181010703702	SAVITRI NARVADAPRASAD SONDHIA	19
24	911182	20181000106956	SONALI SUNIL BORKAR	20
25	911183	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	18
26	911184	20181015803341	SUSHMA VILAS KSHIRSAGAR	19
27	911185	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	19

Spory

Signature Of Examiner

Print Date & Time: 17-09-2021 03:45 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (ORGANIC CHEMISTRY)

Session :2020-21

Unit Test 1

Total Mark's -20

Time :-1 hr 5 marks each

ATTEMPT ANY FOUR

1. State mechanism of wagner meervein reaction.give some examples.
2. Discuss how 1,2 shift is invoved in pinacol- pinacolone rearrangement.
3. Explain the effect of substrate on E2 eliminations.
4. Discuss orientation of double bond formed in products eliminations.
5. Write notes on;
 - i)solvent free reactions.
 - ii) barton reaction

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II
Theory (organic)

Session :2020-21

Assignment 2

- 1) Explain E1, E2 reaction with mechanism.
- 2) Discuss Hoffmann saytfezz rule in brief.
- 3) Explain benzoin reaction with mechanism with example.
- 4) Discuss classification of electrophilic reaction.
- 5) Discuss pinacol pinacolone reaction with example.
- 6) Discuss wagner meerwein with example.
- 7) Explain stobbe reaction with mechanism.
- 8) Describe hydrolysis of esters and amide.
- 9) Explain hydroboration and Michael reaction.
- 10) Describe curtius lossen rearrangement with mechanism.

SSES Amravati's Science College, Congress Nagar Nagpur

Department of Chemistry

M.Sc Sem II- 2020-21 Total Marks: -20

Paper III (Physical Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Shivani Sharma

Sr. No	Roll	Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1	Ku	ADITI SHASHIKANT AWALE	10	05	05	20
2	Ku	APEKSHA NANESHWAR CHOUHDARY	10	05	04	19
3	Ku	ASHWINI NANAKRAM BITLE	10	05	05	20
4	Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	05	05	20
5	Ku	BABITA RAMDAS KAKDE	10	05	05	20
6	Ku	BHAGYASHRI	10	05	05	20
7		BHAVESH KISAN NEWARE	10	05	05	20
8	Ku	CHANDNI KISHOR CHOUDHRY	10	05	05	20
9	Ku	DIKSHA SURYAKANT CHANDEKAR	10	05	05	20
10	Ku	DIPALI SHANKAR JIBHAKATE	10	05	05	20
11	Ku	DIPIKA MURLIDHAR WARUDKAR	10	05	05	20
12		DURGESH RAMESH ADMACHI	10	05	04	19
13	Ku	GOURI ANILRAO BHOSLE	10	05	04	19
14	Ku	KIRTI CHAITRAM BODE	10	05	04	19
15		MOHIT KISHOR KHEDIKAR	07	04	04	15
16		NIKHIL RAMCHANDRA TONGE	10	05	05	20
17		PARISHRAM JAGDISH GAJBHIYE	07	04	04	15
18	Ku	PRAGATI BHOLESWAR TAPASE	10	05	05	20
19	Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	05	05	20
20	Ku	PRIYANKA DHANRAJ DHAMGAYE	10	05	05	20
21	Ku	RUCHITA DNYANESHWAR GECHODE	10	05	05	20
22	Ku	RUTUJA SHYAM POTKAR	10	05	05	20
23	Ku	SAVITRI NARVADAPRASAD SONDHIA	10	05	05	20
24	Ku	SONALI SUNIL BORKAR	10	05	04	19
25	Ku	SUKANYA BALIKARANPRASAD MISHRA	10	05	04	19
26	Ku	SUSHMA VILAS KSHIRSAGAR	10	05	04	19
27		TEJAS SHYAMSUNDAR HINGNEKAR	10	05	05	20

Shivani



Head
Department of Chemistry,
S.S.E.S. Am's Science College,
Congress Nagar, Nagpur.

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: SECOND SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: PHYSICAL CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	911159	20181025114476	ADITI SHASHIKANT AWALE	20
2	911160	20181011312331	APEKSHA NANESHWAR CHOUDHARY	19
3	911161	20181042402456	ASHWINI NANAKRAM BITLE	20
4	911162	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	911163	20181010703591	BABITA RAMDAS KAKDE	20
6	911164	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	911165	20181045912921	BHAVESH KISAN NEWARE	20
8	911166	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	911167	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	911168	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	911169	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	911170	2015016600741486	DURGESH RAMESH ADMACHI	19
13	911171	20181011312369	GOURI ANILRAO BHOSLE	19
14	911172	20181033285596	KIRTI CHAITRAM BODE	19
15	911173	20181011312688	MOHIT KISHOR KHEDIKAR	15
16	911174	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	911175	20181011312698	PARISHRAM JAGDISH GAJBHIYE	15
18	911176		PRAGATI BHOLESWAR TAPASE	20
19	911177	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	911178	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	911179	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	911180	20181011312520	RUTUJA SHYAM POTKAR	20
23	911181	20181010703702	SAVITRI NARVADAPRASAD SONDIYA	20
24	911182	20181000106956	SONALI SUNIL BORKAR	19
25	911183	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	19
26	911184	20181015803341	SUSHMA VILAS KSHIRSAGAR	19
27	911185	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Signature Of Examiner

Date & Time: 17-09-2021 03:51 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Physical Chemistry)

Session :2020-21

Unit Test

Total Mark's -20

Attempt Any 4

- Q.1. Show that a function $\psi = \sin x$ is an acceptable wave function and normalized.
- Q.2. For an atom like Hydrogen give the expression for Hamiltonian in Polar coordinates. Separate the equation in Radial and Angular/Azimuthal Part and discuss their significance.
- Q.3. For a particle in a 3D box with $L_x = L_y = L_z$ draw the first six energy levels and indicate the degeneracy, if any.
- Q.4. Derive the expression for energy of rigid rotor.
- Q.5. Define the excess thermodynamics functions. Derive the expressions for Excess chemical potential and excess Gibbs free energy.

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem II

Theory (Physical Chemistry)

Session :2020-21

Assignment

- Q.1. What is lattice constant ? Derive the relation between lattice constant and density.
- Q.2. What are crystal defects ? Discuss the point and line defects.
- Q.3. Explain why five fold symmetry axis is absent in crystal symmetry.
- Q.4. Write notes on :
- (i) Color Center
 - (ii) Non-stoichiometry in crystals.
- Q.5. Discuss the solid state decomposition and transitions.
- Q.6. Using the Lagrange's method of undetermined multipliers derive the Maxwell-Boltzmann distribution.
- Q.7. Compare the MB, BE and FD distribution.
- Q.8. Give the detailed account of radioactive decay and equilibrium
- Q.9. Write a note on Scintillation counter.
- Q.10. X-ray analysis shows that the unit cell length in NaCl is 562.8 pm. Calculate the density you would expect on this basis. Avogadro constant is $6.023 \times 10^{23} \text{ mol}^{-1}$.

SSES Amravati's Science College, Congress Nagar Nagpur

Department of Chemistry

M.Sc Sem II- 2020-21 Total Marks: -20

Paper IV (Analytical Chemistry)

Unit Test No- 1 & 2 Mark list

Teacher Name: Dr. S. J. Kene

Sr. No	Roll No.		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	ADITI SHASHIKANT AWALE	10	05	05	20
2		Ku	APEKSHA NANESHWAR CHOUDHARY	10	05	05	20
3		Ku	ASHWINI NANAKRAM BITLE	10	05	05	20
4		Ku	ASMIYA AAFREEN SHAHID PARVEZ	10	05	05	20
5		Ku	BABITA RAMDAS KAKDE	10	05	04	19
6		Ku	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	10	05	05	20
7			BHAVESH KISAN NEWARE	10	05	05	20
8		Ku	CHANDNI KISHOR CHOUDHRY	10	05	05	20
9		Ku	DIKSHA SURYAKANT CHANDEKAR	10	05	05	20
10		Ku	DIPALI SHANKAR JIBHAKATE	10	05	05	20
11		Ku	DIPIKA MURLIDHAR WARUDKAR	10	05	05	20
12			DURGESH RAMESH ADMACHI	10	05	04	19
13		Ku	GOURI ANILRAO BHOSLE	10	05	04	19
14		Ku	KIRTI CHAITRAM BODE	10	05	04	19
15			MOHIT KISHOR KHEDIKAR	07	04	04	15
16			NIKHIL RAMCHANDRA TONGE	10	05	05	20
17		Ku	PARISHRAM JAGDISH GAJBHIYE	07	04	04	15
18		Ku	PRAGATI BHOLESHWAR TAPASE	10	05	05	20
19		Ku	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	10	05	05	20
20		Ku	PRIYANKA DHANRAJ DHAMGAYE	10	05	05	20
21		Ku	RUCHITA DNYANESHWAR GECHODE	10	05	05	20
22		Ku	RUTUJA SHYAM POTKAR	10	05	05	20
23		Ku	SAVITRI NARVADAPRASAD SONDHIYA	10	05	05	20
24		Ku	SONALI SUNIL BORKAR	10	05	04	19
25		Ku	SUKANYA BALIKARANPRASAD MISHRA	10	05	04	19
26		Ku	SUSHMA VILAS KSHIRSAGAR	10	05	04	19
27			TEJAS SHYAMSUNDAR HINGNEKAR	10	05	05	20

Skery



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

RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: SECOND SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG

Subject Name: ANALYTICAL CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	911159	20181025114476	ADITI SHASHIKANT AWALE	20
2	911160	20181011312331	APEKSHA NANESHWAR CHOUDHARY	20
3	911161	20181042402456	ASHWINI NANAKRAM BITLE	20
4	911162	20181033411845	ASMIYA AAFREEN SHAHID PARVEZ	20
5	911163	20181010703591	BABITA RAMDAS KAYDE	19
6	911164	20181000413105	BHAGYASHRI CHANDRASHEKHAR GAIKWAD	20
7	911165	20181045912921	BHAVESH KISAN NEWARE	20
8	911166	20173025106012	CHANDANI KISHOR CHOUDHRY	20
9	911167	20181015405019	DIKSHA SURYAKANT CHANDEKAR	20
10	911168	20181040110750	DIPALI SHANKAR JIBHAKATE	20
11	911169	20181015803162	DIPIKA MURLIDHAR WARUDKAR	20
12	911170	2015016600741486	DURGESH RAMESH ADMACHI	19
13	911171	20181011312369	GOURI ANILRAO BHOSLE	19
14	911172	20181033285596	KIRTI CHAITRAM BODE	19
15	911173	20181011312688	MOHIT KISHOR KHEDIKAR	15
16	911174	20181030401484	NIKHIL RAMCHANDRA TONGE	20
17	911175	20181011312698	PARISHRAM JAGDISH GAJBHIYE	15
18	911176	-	PRAGATI BHOLESWAR TAPASE	20
19	911177	20181011312473	PRAJAKTA CHANDRASHEKHAR FEDDEWAR	20
20	911178	20181000413166	PRIYANKA DHANRAJ DHAMGAYE	20
21	911179	20181011312512	RUCHITA DNYANESHWAR GECHODE	20
22	911180	20181011312520	RUTUJA SHYAM POTKAR	20
23	911181	20181010703702	SAVITRI NARVADAPRASAD SONDIYA	20
24	911182	20181000106956	SONALI SUNIL BORKAR	19
25	911183	20181015803336	SUKANYA BALIKARANPRASAD MISHRA	19
26	911184	20181015803341	SUSHMA VILAS KSHIRSAGAR	19
27	911185	20181015405333	TEJAS SHYAMSUNDAR HINGNEKAR	20

Stony

Signature Of Examiner

Date & Time: 17-09-2021 03:37 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem II

Theory (Analytical Chemistry)

Session :2020-21

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (a) Explain any two types of detectors in HPLC.
- (b) Explain the types of columns used in GC.
- (c) Explain the principle of supercritical fluid chromatography and give its applications.
- (d) Explain construction and working of flame ionization detector in Gas Chromatography.

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem II

Theory (Analytical Chemistry)

Session :2020-21

Date:

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (a) Explain the application of polarography in DO estimation.
- (b) Explain the term 'diffusion current' in polarography. Give its utility.
- (e) Calculate diffusion coefficient for Pb^{2+} in polarography if:
 - $i_d = 4.2 \text{ mA}$
 - $m = 1.41 \text{ mg s}^{-1}$
 - $t = 1.85 \text{ s}$
 - $c = 1 \text{ mM}$.
- (f) Explain application of polarography in:
 - (i) Metal speciation
 - (ii) Coordination chemistry.

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

M.Sc Sem III- 2020-21 Total Marks: -20

Paper I (Organic Chemistry Sp.-I)

Unit Test No- 1 & 2 Mark list

Teacher Name: Prerna Kotecha

Sr. No	Roll	Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1	Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2		AJINKYA HIRALAL UPASE	9	05	05	19
3	Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4	Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5	Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6	Ku	MAYURI BANDU KOSARE	10	05	05	20
7	Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8	Ku	NEHA PANDHARI FANDI	10	05	05	20
9	Ku	NIDA MEHROSH NAIMULJAH KHAN	10	05	05	20
10	Ku	NIKITA RAJENDRA BHENDARKAR	10	05	05	20
11		NILESH ASHOK THAWKAR	09	05	05	19
12	Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13	Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14	Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15		RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16		RENUKA DEVENDRARAO KADPATE	10	05	05	20
17	Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18	Ku	ROHAN RAJENDRA GHAROTE	10	05	05	20
19	Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20	Ku	SAMIKSHA HARISHRAO BOKALE	10	05	05	20
21	Ku	SAYALI ASHOKRAO MESHRAM	10	05	05	20
22	Ku	SNEHAL NARESHRAO CHOLIDHARI	10	05	05	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: SPECIAL-I: ORGRANIC CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	796447	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	796448	2015016600034494	AJINKYA HIRALAL UPASE	19
3	796449	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	796450	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	796451	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	796452	20173042402669	MAYURI BANDU KOSARE	20
7	796453	20173031312068	NAMRATA WASUDEO BHAVE	20
8	796454	20173031506629	NEHA PANDHARI FANDI	20
9	796455	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	796456	20173070202942	NIKITA RAJENDRA BHENDARKAR	20
11	796457	20173040108455	NILESH ASHOK THAWKAR	19
12	796458	20201010013153	POOJA VINAYAK BAWANKAR	20
13	796459	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	796460	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	796461	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	796462	20173081513997	RENUKA DEVENDRA KADPATE	20
17	796463	20173011314390	RENUKA PRAMOD BAKDE	20
18	796464	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	796465	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	796466	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	796467	20173015400774	SAYALI ASHOKRAO MESHRAM	20
22	796468	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Signature Of Examiner

Sikori

D. S. J. Kene

Print Date & Time: 12-04-2021 04:30 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (special I – organic)

Session :2020-21

Unit Test

Total Mark's -20

Time :-1 hr 5 marks each

ATTEMPT ANY FOUR

1. Discuss norrish type II rearrangement reaction with example.
2. Provide the reduction product with stereo chemical aspects with two different substrate using
 - i)reduction with LiAlH_4 AND Alcohol
 - ii)reduction with acetylene
3. Comment on ;
 - i)wilkinsons catalyst
 - ii)Peterson synthesis
- 4 .what are organoboranes?discuss stereo and regioselectivity of organoboranes in the synthesis of primary and secondary alcohols.
5. Explain photochemical isomerization of cis and trans alkenes.

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

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

Session :2020-21

Assignment -1

- 1) Discuss the Sharpless asymmetric epoxidation.
- 2) Explain the Collins and Jones reagent.
- 3) Explain in brief oxidation with SeO_2 .
- 4) Discuss oxidation of alkenes with mechanism.
- 5) Explain the Wilkinson's with mechanism.
- 6) Discuss hydrocarbons and alkenes.
- 7) Explain the synthetic applications of epoxides.
- 8) Discuss the sigmatropic rearrangements.
- 9) Explain synthetic applications of $\text{Pb}(\text{OAc})_2$.
- 10) Explain Woodward and Prevost reaction.

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

M.Sc Sem III- 2020-21 Total Marks: -20

Paper II (Organic Chemistry Sp.-II)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S. J. Kene

Sr. No	Roll No.	Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1	Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2		AJINKYA HIRALAL UPASE	10	05	05	20
3	Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4	Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5	Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6	Ku	MAYURI BANDU KOSARE	10	05	05	20
7	Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8	Ku	NEHA PANDHARI FANDI	10	05	05	20
9	Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10	Ku	NIKITA RAJENDRA BHENDARKAR	09	05	05	19
11		NILESH ASHOK THAWKAR	10	05	05	20
12	Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13	Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14	Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15		RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16		RENUKA DEVENDRARAO KADPATE	10	05	05	20
17	Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18	Ku	ROHAN RAJENDRA GHAROTE	10	05	05	20
19	Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20	Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21	Ku	SAYALI ASHOKRAO MESHRAM	10	05	05	20
22	Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

Exam Name: THIRD SEMESTER M.Sc. (CHEMISTRY) (CBCS) PG
Subject Name: SPECIAL-II: ORGANIC CHEMISTRY
College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE
Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	796447	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	796448	2015016600034494	AJINKYA HIRALAL UPASE	20
3	796449	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	796450	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	796451	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	796452	20173042402669	MAYURI BANDU KOSARE	20
7	796453	20173031312068	NAMRATA WASUDEO BHAVE	20
8	796454	20173031506629	NEHA PANDHARI FANDI	20
9	796455	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	796456	20173070202942	NIKITA RAJENDRA BHENDARKAR	19
11	796457	20173040108455	NILESH ASHOK THAWKAR	20
12	796458	20201010013153	POOJA VINAYAK BAWANKAR	20
13	796459	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	796460	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	796461	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	796462	20173081513997	RENUKA DEVENDRA KADPATE	20
17	796463	20173011314390	RENUKA PRAMOD BAKDE	20
18	796464	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	796465	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	796466	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	796467	20173015400774	SAYALI ASHOKRAO MESHAM	20
22	796468	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Signature Of Examiner

S.K. Pr

Dr. S. J. Kene

Print Date & Time: 12-04-2021 04:16 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (special II – organic)

Session :2020-21

Unit Test

Total Mark's -20

Time :-1 hr 5 marks each

ATTEMPT ANY FOUR

1. Discuss how the structure of coniine is established using **degradation** and synthesis method.
2. Discuss nomenclature and occurrence of terpenoids.
3. Write synthetic steps for PGF_{2α}.
4. How is the structure of asperine established.
5. Explain the following;
i)physiological action and
ii)role of steroids

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (special II – organic)

Session :2020-21

Assignment

- 1) Give the synthesis of aldosterone
- 2) Explain in brief types of enzymes.
- 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 cytidine.
- 8) Explain the chemistry of starch and cellulose.
- 9) Give the synthesis of mycristin detail.
- 10) Explain the stereochemistry of amino acids.

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

M.Sc Sem III- 2020-21 Total Marks: -20

Paper III(Polymer Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S. J. Kene

Sr. No	Roll	Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2		AJINKYA HIRALAL UPASE	09	05	05	19
3		Ku ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku MAYURI BANDU KOSARE	10	05	05	20
7		Ku NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku NEHA PANDHARI FANDI	10	05	05	20
9		Ku NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku NIKITA RAJENDRA BHENDARKAR	10	05	05	20
11		NILESH ASHOK THAWKAR	09	05	05	19
12		Ku POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku PRATIBHA WAMAN GHUMDE	10	05	05	20
15		RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16		RENUKA DEVENDRARAO KADPATE	10	05	05	20
17		Ku RENUKA PRAMOD BAKDE	10	05	05	20
18		Ku ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku SAYALI ASHOKRAO MESHARAM	10	05	05	20
22		Ku SNEHAL NARESHRAO CHOUDHARI	10	05	05	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: POLYMER CHEMISTRY-I

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	796447	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	796448	2015016600034494	AJINKYA HIRALAL UPASE	19
3	796449	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	796450	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	796451	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	796452	20173042402669	MAYURI BANDU KOSARE	20
7	796453	20173031312068	NAMRATA WASUDEO BHAVE	20
8	796454	20173031506629	NEHA PANDHARI FANDI	20
9	796455	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	796456	20173070202942	NIKITA RAJENDRA BHENDARKAR	20
11	796457	20173040108455	NILESH ASHOK THAWKAR	19
12	796458	20201010013153	POOJA VINAYAK BAWANKAR	20
13	796459	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	796460	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	796461	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	796462	20173081513997	RENUKA DEVENDRA KADPATE	20
17	796463	20173011314390	RENUKA PRAMOD BAKDE	20
18	796464	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	796465	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	796466	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	796467	20173015400774	SAYALI ASHOKRAO MESHAM	20
22	796468	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Signature Of Examiner

Dr. S. T. Kene

Print Date & Time: 12-04-2021 04:29 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem III

Theory (Polymer Chemistry)

Session :2020-21

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (A) Write the formulae for number average, viscosity average, weight average molecular weight and write down relationship between them.
- (B) Explain any one method in detail for determination of molecular weight of polymer based on colligative property.
- (C) Give an account of the principle and techniques involved in end group analysis for calculating the number average molecular weight of the polymer.
- (D) Write a note on Gel permeation chromatography.

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem III

Theory (Polymer Chemistry)

Session :2020-21

Date:

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

(E) Explain the sedimentation method for determination of molecular mass of the polymer.

(F) Explain the light scattering method for determination of molecular mass of the polymer

(C)How will you determine the molecular weights of Polymer by

Sedimentation equilibrium method?

(D) The intrinsic viscosity of Biopolymer is $3/7 \text{ cm}^3 \text{ g}^{-1}$. Calculate the approximate concentration of Biopolymer in water which would have relative viscosity of 1.9.

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

M.Sc Sem III- 2020-21 Total Marks: -20

Paper IV(Spectroscopy-I)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. R.Surose

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2			AJINKYA HIRALAL UPASE	10	05	05	20
3		Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku	MAYURI BANDU KOSARE	10	05	05	20
7		Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku	NEHA PANDHARI FANDI	10	05	05	20
9		Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku	NIKITA RAJENDRA BHENDARKAR	10	05	05	20
11			NILESH ASHOK THAWKAR	10	05	05	20
12		Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15			RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16			RENUKA DEVENDRARAO KADPATE	09	05	05	19
17		Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18		Ku	ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku	SAYALI ASHOKRAO MESHARAM	10	05	05	20
22		Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: SPECTROSCOPY-I

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Winter-2020

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	796447	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	796448	2015016600034494	AJINKYA HIRALAL UPASE	20
3	796449	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	796450	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	796451	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	796452	20173042402669	MAYURI BANDU KOSARE	20
7	796453	20173031312068	NAMRATA WASUDEO BHAVE	20
8	796454	20173031506629	NEHA PANDHARI FANDI	20
9	796455	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	796456	20173070202942	NIKITA RAJENDRA BHENDARKAR	20
11	796457	20173040108455	NILESH ASHOK THAWKAR	20
12	796458	20201010013153	POOJA VINAYAK BAWANKAR	20
13	796459	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	796460	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	796461	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	796462	20173081513997	RENUKA DEVENDRA KADPATE	19
17	796463	20173011314390	RENUKA PRAMOD BAKDE	20
18	796464	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	796465	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	796466	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	796467	20173015400774	SAYALI ASHOKRAO MESHRAM	20
22	796468	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Signature Of Examiner

Dr. S. J. Kedar

Print Date & Time: 12-04-2021 04:25 PM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (Spectroscopy-I)

Session :2020-21

Unit Test

Total Mark's -20

Attempt Any 4

Q.1. Explain the following terms:

(i) Morse Potential energy diagram

(ii) Force Constant

5

Q.2. Discuss the Classical theory of Raman Effect.

5

Q.3. Explain coherent antistokes Raman Spectroscopy.

5

Q.4. Discuss the following terms:

(i) Pure vibrational Raman Spectra

(ii) Vibrational rotational Raman Spectra

5

Q. 5. Explain the term P,Q,R branches.

5

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem III

Theory (Spectroscopy-I)

Session :2020-21

Assignment

- Q.1. Explain Schoenflies Symbol.
- Q.2. Write a note on N-Rule
- Q.3. Explain the ESR Spectrum of biphenylene anion with spectral intensities.
- Q.4. Draw schematic representation of IR spectrometer and write its any two applications.
- Q.5. Discuss Great Orthogonality Theorem.
- Q.6. What is similarity transformation? Give its application in group theory.
- Q.7. Discuss about Kramer's degeneracy.
- Q.8. Draw schematic diagram of mass spectrometer.
- Q.9. Calculate theoretical number of vibrational degrees of freedom in SO_2 , benzene, CO_2 and N_2O .
- Q.10. Explain complementary nature of IR and Raman spectra of molecules with centre of symmetry.

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

M.Sc Sem IV- 2020-21 Total Marks: -20

Paper I (Organic Chemistry Sp.-I)


Unit Test No- 1 &2 Mark list

Teacher Name: P. Bhojar

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2			AJINKYA HIRALAL UPASE	08	04	05	17
3		Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku	MAYURI BANDU KOSARE	10	05	05	20
7		Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku	NEHA PANDHARI FANDI	10	05	05	20
9		Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku	NIKITA RAJENDRA BHENDARKAR	10	04	04	18
11			NILESH ASHOK THAWKAR	09	04	04	17
12		Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15		Ku	RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16		Ku	RENUKA DEVENDRARAO KADPATE	10	05	05	20
17		Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18			ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku	SAYALI ASHOKRAO MESHARAM	10	05	05	20
22		Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20

Pramod




 Head
 Department of Chemistry
 S.S.S. Amr's Scien
 Congress Nagar



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: ORGANIC CHEMISTRY-I

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	939284	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	939285	2015016600034494	AJINKYA HIRALAL UPASE	17
3	939286	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	939287	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	939288	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	939289	20173042402669	MAYURI BANDU KOSARE	20
7	939290	20173031312068	NAMRATA WASUDEO BHAVE	20
8	939291	20173031506629	NEHA PANDHARI FANDI	20
9	939292	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	939293	20173070202942	NIKITA RAJENDRA BHENDARKAR	18
11	939294	20173040108455	NILESH ASHOK THAWKAR	17
12	939295	20201010013153	POOJA VINAYAK BAWANKAR	20
13	939296	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	939297	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	939298	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	939299	20173081513997	RENUKA DEVENDRA KADPATE	20
17	939300	20173011314390	RENUKA PRAMOD BAKDE	20
18	939301	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	939302	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	939303	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	939304	20173015400774	SAYALI ASHOKRAO MESHARAM	20
22	939305	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Signature

Signature Of Examiner

Print Date & Time: 21-07-2021 08:02 AM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special I – organic)

Session :2020-21

Unit Test

Total Mark's -20

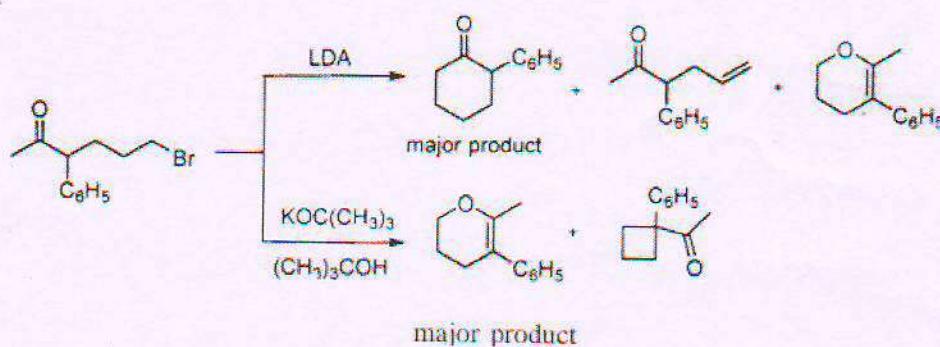
Time :-1 hr

5 marks each

N.B. :— (1) All questions are compulsory.

(2) All questions carry equal marks.

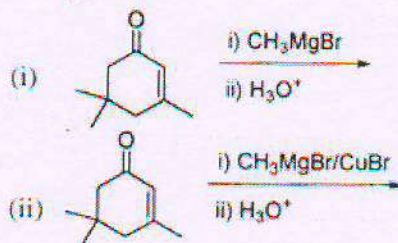
1. (a) Draw stepwise mechanism illustrating how each product is formed.



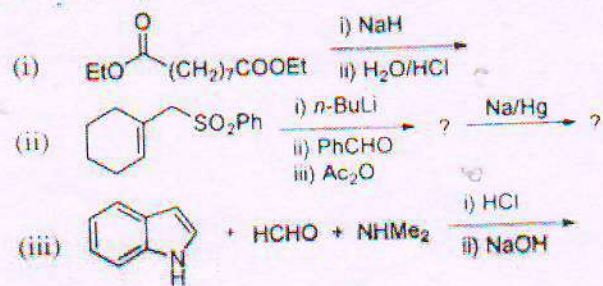
(b) How would you prepare the following compounds using either an acetoacetic ester synthesis or a malonic ester synthesis ?



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



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



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special I – organic)

Session :2020-21

Assignment

Solve the following.

- 1) Explain the phosphorous and sulphur ylide.
- 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.

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	13/01/21	18/01	19/01	25/01	4/02	10/02	11/02	17/02	18/02	20/02	25/02	2/03	4/03	13/03	13/03	25/03	28/04	9/04	10/04		
1	Ku	AISHWARYA SUKHALAL RAMTEKE	.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
2		AJINKYA HIRALAL UPASE		.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
3	Ku	ASTHA RAJUMAR PANDEY		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
4	Ku	GAYATRI PRADIPKUMAR CHAWARDOL		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
5	Ku	JAYSHREE TEJRAM GAWALI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	95%
6	Ku	MAYURI BANDU KOSARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
7	Ku	NAMRATA WASUDEO BHAVE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
8	Ku	NEHA PANDHARI FANDI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
9	Ku	NIDA MEHROSH NAIMULLAH KHAN		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100%
10	Ku	NIKITA RAJENDRA BHENDARKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
11	Ku	NIRESH ASHOK THAWKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
12	Ku	POOJA VINAYAK BAWANKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
13	Ku	PRAJAKTA RAMPRASAD AKARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
14	Ku	PRATIBHA WAMAN GHUMDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
15	Ku	RAJANI CHANDRAPRAKASH ZOLE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
16	Ku	RENUKA DEVENDRARAO KADPATE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
17	Ku	RENUKA PRAMOD BAKDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	85%
18		ROHAN RAJENDRA GHAROTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
19	Ku	RUCHIKA RAJENDRA GADGE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
20	Ku	SAMIKSHA HARISHRAO POKALE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
21	Ku	SAYALI ASHOKRAO MESHARAM		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%
22	Ku	SNEHAL NARESHRAO CHOUDHARI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	90%

% of Attendance

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

M.Sc Sem IV- 2020-21 Total Marks: -20

Paper II (Organic Chemistry Sp.-II)


Unit Test No- 1 &2 Mark list

Teacher Name: P. Kotecha

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2			AJINKYA HIRALAL UPASE	10	04	04	18
3		Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku	MAYURI BANDU KOSARE	10	05	05	20
7		Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku	NEHA PANDHARI FANDI	10	05	05	20
9		Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku	NIKITA RAJENDRA BHENDARKAR	10	04	04	18
11			NILESH ASHOK THAWKAR	09	04	04	17
12		Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15			RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16			RENUKA DEVENDRARAO KADPATE	10	05	05	20
17		Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18			ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku	SAYALI ASHOKRAO MESHRAM	10	05	05	20
22		Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20

P. Kotecha




Head
Department of Chemistry,
S.S.E.S. Am's Science College,
Congress Nagar



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: ORGANIC CHEMISTRY-II

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	939284	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	939285	2015016600034494	AJINKYA HIRALAL UPASE	18
3	939286	20173015901078	ASTHA RAJKUMAR PANDEY	20
4	939287	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	939288	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	939289	20173042402669	MAYURI BANDU KOSARE	20
7	939290	20173031312068	NAMRATA WASUDEO BHAVE	20
8	939291	20173031506629	NEHA PANDHARI FANDI	20
9	939292	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	939293	20173070202942	NIKITA RAJENDRA BHENDARKAR	18
11	939294	20173040108455	NILESH ASHOK THAWKAR	17
12	939295	20201010013153	POOJA VINAYAK BAWANKAR	20
13	939296	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	939297	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	939298	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	939299	20173081513997	RENUKA DEVENDRA KADPATE	20
17	939300	20173011314390	RENUKA PRAMOD BAKDE	20
18	939301	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	939302	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	939303	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	939304	20173015400774	SAYALI ASHOKRAO MESHARAM	20
22	939305	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

S. Keny

Signature Of Examiner

Print Date & Time: 21-07-2021 08:10 AM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special II – organic)

Session :2020-21

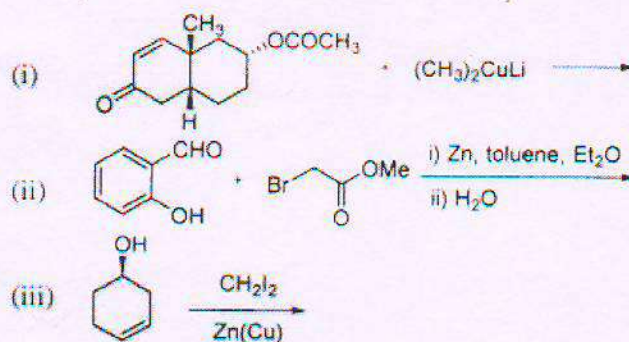
Unit Test

Total Mark's -20

Time :-1 hr

5 marks each

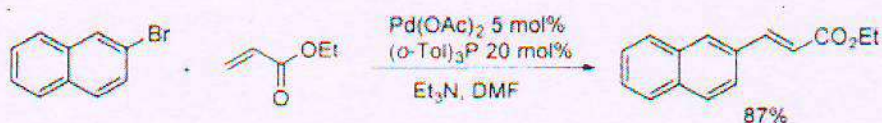
1. Predict the product of the following reactions



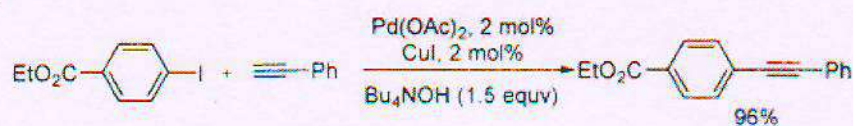
2. write a suitable mechanism for the following reactions.



3. how will you bring about the following transformations



4. write a suitable mechanism for the following reaction.



SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (special II – organic)

Session :2020-21

Assignment 1

Solve the following.

- 1) Explain classification of nucleic acids.
- 2) Discuss remarkable properties of ENZYMES.
- 3) Explain catalytic power and specificity of enzymes.
- 4) Discuss fishers lock and key model of enzymes.
- 5) Explain koshlands induced fit hypothesis.
- 6) Explain in brief mechanism of enzyme action.
- 7) Discuss in detail primary and secondary structure of nucleic acid .
- 8) Explain DNA replication and heredity.
- 9) Explain purines and pyrimidines bases of nucleic acids.
- 10) Explain structure determination of vitamins in detail.

SSES Amravati's Science College, Congress Nagar Nagpur

Department of Chemistry

M.Sc Sem IV- 2020-21 Total Marks: -20

Paper III (Polymer Chemistry)

Unit Test No- 1 &2 Mark list

Teacher Name: Dr. S.J. Kene

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2			AJINKYA HIRALAL UPASE	10	04	04	18
3		Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku	MAYURI BANDU KOSARE	10	05	05	20
7		Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku	NEHA PANDHARI FANDI	10	05	05	20
9		Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku	NIKITA RAJENDRA BHENDARKAR	10	04	04	18
11			NILESH ASHOK THAWKAR	09	04	04	17
12		Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15			RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16			RENUKA DEVENDRARAO KADPATE	10	05	05	20
17		Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18		Ku	ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku	SAYALI ASHOKRAO MESHARAM	10	05	05	20
22		Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20

Skany



Head
Department of Chemistry,
S.S.E.S. Am's Science College,
Congress Nagar, Nagpur.



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: POLYMER CHEMISTRY

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	939284	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	939285	2015016600034494	AJINKYA HIRALAL UPASE	18
3	939286	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	939287	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	939288	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	939289	20173042402669	MAYURI BANDU KOSARE	20
7	939290	20173031312068	NAMRATA WASUDEO BHAVE	20
8	939291	20173031506629	NEHA PANDHARI FANDI	20
9	939292	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	939293	20173070202942	NIKITA RAJENDRA BHENDARKAR	18
11	939294	20173040108455	NILESH ASHOK THAWKAR	17
12	939295	20201010013153	POOJA VINAYAK BAWANKAR	20
13	939296	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	939297	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	939298	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	939299	20173081513997	RENUKA DEVENDRA KADPATE	20
17	939300	20173011314390	RENUKA PRAMOD BAKDE	20
18	939301	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	939302	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	939303	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	939304	20173015400774	SAYALI ASHOKRAO MESHRAM	20
22	939305	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

S. K. K.

Signature Of Examiner

Print Date & Time: 21-07-2021 08:15 AM

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem IV

Theory (Polymer Chemistry)

Session :2020-21

Time: 1Hrs

Unit Test

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (a) Explain the application of biomedical polymers in artificial heart, kidney and skin.
- (b) Explain various types of silicone elastomers and its applications.
- (c) Write the synthesis and any two applications of coordination polymers.
- (d) Write any two synthesis and applications of biomedical polymers.

SSES Amt's Science College, Congress Nagar, Nagpur

Department of Chemistry

M.Sc. Chemistry Sem IV

Theory (Polymer Chemistry)

Session :2020-21

Date:

Assignment

Total Marks -20

All questions are compulsory and Each question carry 5 mark.

- (1) Explain the preparation, properties and applications of silicone oils.
- (2) Write the synthesis of Poly (Organophosphazenes) and give its applications.
- (3) Write in detail any one method for the synthesis of graft copolymer.
- (4) Explain the application of IR with respect to polymer characterization.

Sr. No	Roll	Students Full Name	Total upto last Month		Periods	2020 - 2021												Percentage								
			Deli	Att		1	2	3	4	5	6	7	8	9	10	11	12		13	14	15					
1		Ramteke Aishwarya				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	84%	
2		Pandey Astha				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	27	93%
3		Upase Ajinkya				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	82%
4		Chaawardole Gayatri				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
5		Gawali Jayshree				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
6		Kosare Mayuri				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
7		Bhandare Nikita				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%
8		Bhave Namrata				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%
9		Fandi Neha				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	23	79%
10		Khan Nida				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	85%
11		Thawkar Nilesh				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%
12		Akare Prajakta				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%
13		Ghumde Pratibha				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%
14		Bawankar Pooja				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	23	79%
15		Bakde Renuka				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
16		Kadpate Renuka				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	82%
17		Gharote Rohan				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	82%
18		Zole Rajani				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	82%
19		Jadge Ruchika				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	82%
20		Meshram Sayali				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
21		Pokale Samiksha				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	25	86%
22		Choudhari Snehal				P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	22	75%

Sikony
Dr. S.J. Kene

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

M.Sc Sem IV- 2020-21 Total Marks: -20

Paper IV (Spectroscopy -II)


Unit Test No- 1 & 2 Mark list

Teacher Name: Dr. R. Surose

Sr. No	Roll		Students Full Name	Unit Test I (10)	Assignment (5)	Attendance (5)	Total (20)
1		Ku	AISHWARYA SUKHALAL RAMTEKE	10	05	05	20
2			AJINKYA HIRALAL UPASE	09	04	04	17
3		Ku	ASTHA RAJKUMAR PANDEY	10	05	05	20
4		Ku	GAYATRI PRADIPKUMAR CHAWARDOL	10	05	05	20
5		Ku	JAYSHREE TEJRAM GAWALI	10	05	05	20
6		Ku	MAYURI BANDU KOSARE	10	05	05	20
7		Ku	NAMRATA WASUDEO BHAVE	10	05	05	20
8		Ku	NEHA PANDHARI FANDI	10	05	05	20
9		Ku	NIDA MEHROSH NAIMULLAH KHAN	10	05	05	20
10		Ku	NIKITA RAJENDRA BHENDARKAR	10	04	04	18
11			NILESH ASHOK THAWKAR	10	04	04	18
12		Ku	POOJA VINAYAK BAWANKAR	10	05	05	20
13		Ku	PRAJAKTA RAMPRASAD AKARE	10	05	05	20
14		Ku	PRATIBHA WAMAN GHUMDE	10	05	05	20
15		Ku	RAJANI CHANDRAPRAKASH ZOLE	10	05	05	20
16		Ku	RENUKA DEVENDRARAO KADPATE	10	05	05	20
17		Ku	RENUKA PRAMOD BAKDE	10	05	05	20
18			ROHAN RAJENDRA GHAROTE	10	05	05	20
19		Ku	RUCHIKA RAJENDRA GADGE	10	05	05	20
20		Ku	SAMIKSHA HARISHRAO POKALE	10	05	05	20
21		Ku	SAYALI ASHOKRAO MESHARAM	10	05	05	20
22		Ku	SNEHAL NARESHRAO CHOUDHARI	10	05	05	20

Surose




 Department of Chemistry,
 S.S.E.S. Am's Science College,
 Congress Nagar, Nagpur



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

<https://www.nagpur.university>

Internal Report

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

Subject Name: SPECTROSCOPY-II

College Name: (100) SHRI SHIVAJI SCIENCE COLLEGE

Session: Summer-2021

Sr	Seat No	Enrollment	Student Name	Marks / Max-20
1	939284	20173000111097	AISHWARYA SUKHALAL RAMTEKE	20
2	939285	2015016600034494	AJINKYA HIRALAL UPASE	17
3	939286	20173015801078	ASTHA RAJKUMAR PANDEY	20
4	939287	20173011314243	GAYATRI PRADIPKUMAR CHAWARDOL	20
5	939288	20173015400626	JAYSHREE TEJRAM GAWALI	20
6	939289	20173042402669	MAYURI BANDU KOSARE	20
7	939290	20173031312068	NAMRATA WASUDEO BHAVE	20
8	939291	20173031506629	NEHA PANDHARI FANDI	20
9	939292	20173084107789	NIDA MEHROSH NAIMULLAH KHAN	20
10	939293	20173070202942	NIKITA RAJENDRA BHENDARKAR	18
11	939294	20173040108455	NILESH ASHOK THAWKAR	18
12	939295	20201010013153	POOJA VINAYAK BAWANKAR	20
13	939296	20173040108258	PRAJAKTA RAMPRASAD AKARE	20
14	939297	20173031312084	PRATIBHA WAMAN GHUMDE	20
15	939298	2013040108293	RAJANI CHANDRAPRAKASH ZOLE	20
16	939299	20173081513997	RENUKA DEVENDRA KADPATE	20
17	939300	20173011314390	RENUKA PRAMOD BAKDE	20
18	939301	20173010700415	ROHAN RAJENDRA GHAROTE	20
19	939302	20173011314403	RUCHIKA RAJENDRA GADGE	20
20	939303	20173031506668	SAMIKSHA HARISHRAO POKALE	20
21	939304	20173015400774	SAYALI ASHOKRAO MESHAM	20
22	939305	2014016600927391	SNEHAL NARESHRAO CHAUDHARI	20

Syong
Signature Of Examiner

Print Date & Time: 21-07-2021 08:19 AM

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

M.Sc. Chemistry Sem IV

Theory (Spectroscopy-II)

Session :2020-21

Unit Test

Total Mark's -20

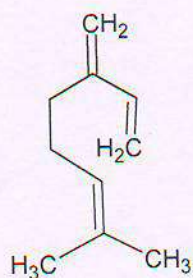
Attempt Any 4

Q.1. Explain Auger electron spectroscopy.

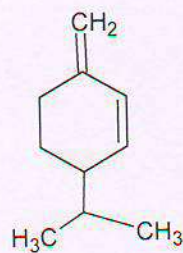
5

Q.2. How will you differentiate between the following pair of terpene using Woodward-Fieser rules in UV-Visible spectroscopy ?

5



Myrcene



α -phellandrene

Q.3. Define the following terms :

(i) Bathochromic shift

(ii) Hypsochromic shift

(iii) Chromophore

(iv) Hyperchromic shift.

5

Q.4. State and explain Beer- Lambert Law.

5

Q.5. Explain photoelectric effect.

5

SSES Amt's Science College, Congress Nagar, Nagpur

Department Of Chemistry

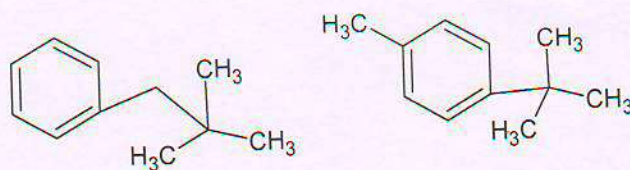
M.Sc. Chemistry Sem IV

Theory (Spectroscopy-II)

Session :2020-21

Assignment

Q.1. How could ^1H NMR distinguish between the compounds in each of the following pairs ?



Q.2 Explain the following :

(1) The ^1H NMR spectrum of monofluoro acetone shows a doublet for methyl protons with $J = 4.3$ Hz, explain.

(2) The ^{13}C NMR spectrum (PND spectrum) of benzene shows singlet at 128.0 d; while completely deuterated benzene (C_6D_6) shows three lines with intensities 1 : 1 : 1 at 128.0 d. Explain.

Q.3. Derive the Bragg's expression equation and discuss the experimental setup of Bragg's method for crystal structure determination.

Q.4. Write a note on Debye-Scherrer technique of X-ray diffraction.

Q.5. How scattering intensity is related to scattering angle ? Give the significance of Wierl equation.

Q.6. Write a short note on each of the following :

(a) Frank-Condon Principle

(b) Spin-Spin Coupling

(c) COSY NMR

(d) LEED

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

Science College, Congress Nagar, Nagpur.
2020-2021

Name of Teacher

P. R. Swase
(Spectroscopy - II)

% Attendance

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	13/01/21	18/01/21	19/01/21	25/01/21	4/02/21	10/02/21	11/02/21	17/02/21	18/02/21	20/02	23/02	2/03	4/03	12/03	13/03	25/03/21	8/04/21	9/04/21	10/04/21	15/04/21
1	Ku	AISHWARYA SUKHALAL RAMTEKE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2		AJINKYA HIRALAL UPASE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	Ku	ASTHA RAJKUMAR PANDEY		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	Ku	GAYATRI PRADIPKUMAR CHAWARDOL		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	Ku	JAYSHREE TEJRAM GAWALI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	Ku	MAYURI BANDU KOSARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	Ku	NAMRATA WASUDEO BHAVE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	Ku	NEHA PANDHARI FANDI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	Ku	NIDA MEHROSH NAIMULLAH KHAN		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Ku	NIKITA RAJENDRA BHENDARKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Ku	NILESH ASHOK THAWKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Ku	POOJA VINAYAK BAWANKAR		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Ku	PRAJAKTA RAMPRASAD AKARE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	Ku	PRATIBHA WAMAN GHUMDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	Ku	RAJANI CHANDRAPRAKASH ZOLE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	Ku	RENUKA DEVENDRARAO KADPATE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	Ku	RENUKA PRAMOD BAKDE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18		ROHAN RAJENDRA GHAROTE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	Ku	RUCHIKA RAJENDRA GADGE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	Ku	SAMIKSHA HARISHRAO POKALE		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	Ku	SAYALI ASHOKRAO MESHARAM		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	Ku	SNEHAL NARESHRAO CHOUDHARI		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

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