



**SKR & SKR GOVT. COLLEGE FOR WOMEN, KADAPA.
(AUTONOMOUS)**

Reaccredited with 'B' Grade by NAAC
Y.S.R. Kadapa District – 516001, Andhra Pradesh, India.
Affiliated to Yogi Vemana University



Dr. P. Subba Lakshumma
M.Com., M.Phil., Ph.D.
Principal

E-mail: kadapaw.jkc@gmail.com
Website: www.skrgcdcwakdp.edu.in
Established: 1973

Academic Calendar: 2021 -22

I, III and V Semesters

S. No	PARTICULARS	DATE
1	Commencement of classes for V semester	Online classes 02-09-2021
2	Commencement of classes for V semester	Offline classes 28-10-2021
3	Online Admissions into I year UG Programs Notification	16-09-2021
	Admissions into I year UG Programs – Phase-I	15.11.2021
	Admissions into I year UG Programs – Phase-II	23.12.2021
	Spot admissions	12.02.2022
4	Commencement of Classes for I semester	15.11.2021
5	Last date for admission into I semester of UG Courses	11.02.2022
6	Commencement of I internal exams for V semester	10.11.2021 to 12.11.2021
7	Commencement of II internal exams for V semester	03.12.2021 to 06.12.2021
8	Exam notification and last date for payment of fee for V semester	01.12.2021 to 15-12-2021
9	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for V semester	15-12-2021 & 07.01.2022
10	Commencement of Practical examinations for V semester	04.01.2022 to 07-01-2022
11	Commencement of End Semester examinations for V semester	18.01.2022 to 29.01.2022
12	Results announcement for V semester	21.02.2022
13	Commencement of Classes for III semester	25.10.2021



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14	Commencement of I internal exams for III semester	27.12.2021 to 29.12.2021
15	Commencement of II internal exams for III semester	31.01.2022 to 04.02.2022
16	Exam notification and last date for payment of fee for III semester	15.02.2022 to 24-02-2022
17	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for III semester	23-02-2022 & 28.02.2022
18	Commencement of Practical examinations for III semester	24-02-2022 to 28-02-2022
19	Commencement of End Semester examinations for III semester	03.03.2022 to 19.03.2022
20	Results announcement for III semester	18.04.2022
21	Commencement of I internal exams for I semester	21.02.2022 to 25.02.2022
22	Commencement of II internal exams for I semester	03.03.2022 to 08.03.2022
23	Exam notification and last date for payment of fee for I semester	23.03.2022 to 31.03.2022
24	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for I semester	31-03-2022 & 08.04.2022
25	Commencement of Practical examinations for I semester	06.04.2022 to 08.04.2022
26	Commencement of End Semester examinations for I semester	11.04.2022 to 25.04.2022
27	Results announcement for I Semester	20.05.2022

II, IV and VI Semesters

S.No	PARTICULARS	DATE
1	Commencement of Classes for VI semester	31.01.2022
2	Commencement of Classes for IV semester	14.03.2022
3	Commencement of I internal examinations for VI semester	06.04.2022 to 08.04.2022
4	Commencement of II internal examinations for VI semester	21.04.2022 to 23.04.2022
5	Exam notification and last date for payment of fee for VI semesters	26.05.2022 to 10.06.2022



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6	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for VI semester	10.06.2022 & 02.07.2022
7	Commencement of Practical Examinations for VI semester	28.06.2022 to 02.07.2022
8	Commencement of End Semester examinations for VI semester	14.06.2022 to 25.06.2022
9	Publication of Results for VI semester	18.07.2022
10	Commencement of I internal examinations for IV semester	16.06.2022 to 22.06.2022
11	Commencement of II internal examinations for IV semester	11.07.2022 to 16.07.2022
12	Exam notification and last date for payment of fee for IV semesters	27.07.2022 to 04.08.2022
13	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for IV semester	04.08.2022 & 08.08.2022
14	Commencement of Practical Examinations for IV semester	02.08.2022 to 08.08.2022
15	Commencement of End Semester examinations for IV semester	10.08.2022 to 24.08.2022
16	Publication of Results for IV semester	15.09.2022
17	Commencement of Classes for II semester	30.03.2022
18	Commencement of I internal examinations for II semester	11.07.2022 to 16.07.2022
19	Commencement of II internal examinations for II semester	07.08.2022 to 12.08.2022
20	Exam notification and last date for payment of fee for II semesters	05.09.2022 to 08.09.2022
21	Last date for submission of student consolidated attendance to COE (A) & Last Instruction Day for II semester	08.09.2022 & 14.09.2022
22	Commencement of Practical Examinations for II semester	09.09.2022 to 14.09.2022
23	Commencement of End Semester examinations for II semester	15.09.2022 to 26.09.2022
24	Publication of Results for II semester	19.10.2022



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Academic Calendar 2020-21 I, III & V SEMESTERS		
S.NO	PARTICULARS	DATE
1	Re-opening of the College after summer vacation and Commencement of class for III & V semesters	Online Classes 03-08-2020 Offline Classes 02-11-2020
2	Online Admissions into I year UG Programs	
	Admissions into I year UG Programs-Phase-I	25-01-2021 to 27-01-2021
	Admissions into I year UG Programs-Phase-II	22-02-2021 to 25-02-2021
	Admissions into I year UG Programs-Phase-III	08-03-2021 to 09-03-2021
	Spot Admissions	15-03-2021 to 31-03-2021
3	Commencement of class for I semesters	28-01-2021
4	Last day for admission into I semester of UG Courses	22-03-2021
5	Commencement of I internal exams for III and V semesters	05-12-2021 to 09-12-2020



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6	Commencement of II internal exams for III and V semesters	18-01-2021 to 21-01-2021
7	Exam Notification and last date for payment of fee for III and V semesters	10-02-2021 to 28-02-2021
8	Last date for submission of student consolidated attendance to COE(Autonomous)	14-03-2021
9	Commencement of practical examinations for III and V semesters	10-03-2021 to 14-03-2021
10	Last instruction day for III and V semesters	14-03-2021
11	Commencement of end Semester End Examinations III & V	15-03-2021 to 29-03-2021
12	Result announcement for III and V semesters	21-04-2021
13	Commencement of I internal exams for I semesters	07-04-2021 to 09-04-2021
14	Commencement of II internal exams for I semesters	20-07-2021 to 23-07-2021
15	Exam Notification and last date for payment of fee for I semesters	16-07-2021 to 28-07-2021
16	Last date for submission of student consolidated attendance to COE(Autonomous)	30-07-2021



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17	Commencement of practical examinations for I semesters	15-08-2021 to 18-08-2021
18	Last instruction day for I semesters	30-07-2021
19	Commencement of Semester End Examinations for I Semester	02-08-2021 to 14-08-2021
20	Result announcement for I semesters	08-09-2021



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II, IV&VI SEMESTERS		
S.NO	PARTICULAES	DATE
1	Commencement of I internal exams for IV and VI semesters	30-03-2021 to 04-04-2021
2	Commencement of I internal exams for II semesters	07-04-2021to 09-04-2021
3	Commencement of I internal exams IV and VI semesters	08-07-2021 to 10-07-2021
4	Commencement of II internal exams IV and VI semesters	17-07-2021 to 21-07-2021
5	Commencement of II internal exams II semesters	20-09-2021 to 22-09-2021
6	Last date for submission of student consolidated attendance to COE(Autonomous) for IV and VI semesters	12-08-2021
7	Last date for submission of student consolidated attendance to COE(Autonomous) for II semesters	01-10-2021



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8	Exam Notification and last date for payment of fee for IV and VI semesters.	26-07-2021 to 07-08-2021
9	Exam Notification and last date for payment of fee for II semester.	20-09-2021 to 28-09-2021
10	Last instruction day for IV and VI semesters.	12-08-2021
11	Last instruction day for II semesters.	01-10-2021
12	Commencement of practical examinations for IV and VI semesters.	12-08-2021 to 15-08-2021
13	Commencement of practical examinations for II semesters.	02-10-2021 to 05-10-2021
14	Commencement of end semesters Examinations IV and VI semesters.	16-08-2021 to 31-08-2021
15	Publication of Result for IV and VI semesters.	01-10-2021
16	Commencement of Semester End Examinations II semester.	06-10-2021 to 23-10-2021
17	Publication of Result for II semesters.	11-11-2021



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Academic Calender 2019-2020
I, III & V SEMESTERS

S.NO	PARTICULARS	DATE
1	Online Admission Registration cceinfo.ap.gov.in	02-05-2019
2	Merit List Publication	03-06-2019
3	Admission into I year UG Programmes	03-06-2019 to 30-06-2019
4	Re-opening of the College after summer vacation and Commencement of class for III & V semesters	10-06-2019
5	Commencement of class for I semesters	17-06-2019
6	Last day for admission into I semester of UG Courses for extended seats in demanded groups	29-07-2019
7	Commencement of I internal exams for I,III and V semesters	06-09-2019 to 11-08-2019
8	Commencement of II internal exams for I,III and V semesters	06-09-2019
9	Exam Notification and last date for payment of fee for I and III semesters	05-09-2019 to 20-09-2019
10	Last date for submission of student consolidated attendance to COE(Autonomous)	30-09-2019
11	Commencement of practical examinations for I,III and V Semesters	01-10-2019
12	Last instruction day for I and III semesters	04-10-2019
13	Dasara holidays	05-10-2019 to 14-10-2019
14	Commencement of end semesters Examinations for I ,III and V and semesters	23-10-2019 to 13-11-2019
15	Result announcement for I and III semesters	30-11-2019



P. Srinu Reddy

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II, IV & VI SEMESTERS

1	Commencement of class for II,IV and VI semesters	14-11-2019
2	Commencement of I internal exams for II,IV and VI semesters	6-12-2019 to 13-01-2020
3	Sankranti Holidays	14-01-2020 to 16-01-2020
4	Last date for submission of student consolidated attendance to COE(Autonomous)	22-01-2020
5	Exam Notification and last date for payment of fee for II,IV and VI semesters/Supplementary for II Semester	23-01-2020 to 13-02-2020
6	Commencement of II internal examinations for II,IV and VI semesters	06-02-2020 to 11-02-2020
7	Commencement of practical examinations for II,IV and VI semesters	24-02-2020
8	Last instruction day for II,IV and VI semesters	28-02-2020
9	Commencement of end semesters Examinations for II ,IV and VI and semesters	12-03-2020
10	Publication of Results	31-04-2020
11	Last working day of the academic year 2019-2020	03-04-2020
12	Re-opening of the College after summer vacation for the Academic year 2019-2020	01-06-2020



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Academic Calendar- 2018-2019

I, III & V SEMESTERS

S.NO	PARTICULARS	DATE
1	Issue of Applications for I year UG PROGRAMMES	02-05-2018 to 30-06-2018
2	Merit List Publication	01-06-2018
3	Admission into I year UG Programmes	02-06-2018 to 30-06-2018
4	Reopening of the College and Commencement of class for III & V semesters	05-06-2018
5	Commencement of class for I semesters	12-06-2018
6	Last date for Admission in UG course	30-06-2018
7	Commencement of I internal exams for I and III Semesters	30-07-2018
8	Commencement of II internal exams for I and III Semesters	30-09-2018
9	Exam Notification and last date for payment of fee for I and III semesters	03-09-2018- to 15-09-2018
10	Last date for submission of student consolidated attendance to COE(Autonomous)	30-09-2018
11	Commencement of practical examinations for I and III semesters	01-10-2018
12	Last instruction day for I and III semesters	06-10-2018
13	Dasara holidays	16-10-2018 to 18-10-2018
14	Commencement of Sem End Examinations for I Semester and Supplementary for I semesters	15-11-2018 to 28-11-2018



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15	Commencement of Sem End Examinations for III Semester and Supplementary for III semesters	25-10-2018 to 13-11-2018
16	Commencement of Sem End Examinations for V Semester	11-10-2018 to 03-11-2018
15	Result announcement for I and III semesters	20-11-2018

II, IV&VI SEMESTERS

S.N O	PARTICULARS	DATE
1	Commencement of class for II and IV semesters	05-11-2018
2	Commencement of I internal exams for II and IV Semesters	17-12-2018
3	Sankranti Holidays	14-01-2019 to 16-01-2019
4	Last date for submission of student consolidated attendance to COE(Autonomous)	22-01-2019
5	Exam Notification and last date for payment of fee for II and IV semesters/ II semesters Supplementary	20-01-2019 to 15-02-2019
6	Commencement of II internal exams for II and IV Semesters	11-02-2019
7	Commencement of practical examinations for II and IV Semesters	07-03-2019
8	Last instruction day for II and IV semesters	28-02-2019
9	Commencement of end semesters Examinations For II & IV Semesters	07-03-2019
10	Result announcement for II and IV semesters	25-03-2019



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11	Last Working Day	03-04-2019
12	Summer Vacation	
13	Re Opening of the college after Summer Vacation for 2019-2020	03-06-2019

Academic Calendar for I Year UG Programmes under Autonomous 2017-2018

Academic Calendar 2017-2018

I, III, V SEMESTERS

S.NO	PARTICULAES	DATE
1	Re-opening of the college after summer Vacation and commencement of III& V Semester class	15-06-2017 (Thursday)
2	Commencement of Class for First Semester	26-06-2017 (Monday)
3	Last date for admission into I Semester of I year Degree Course without LATE FEE	10-07-2017 (Monday)
4	Last date to pay prescribed fee for extra seats(by the college) (Not exceeding 20% of sanction strength)	12-07-2017(Wednesday)
5	Last date for admission into I Semester of I year Degree Course with LATE FEE	20-07-2017(Thursday)
6	Commencement of I st Internal exams for I,III,V & semesters	09-08-2017(Wednesday)
7	Last date for submission of I st Internal exams for I,III,V semesters	19-08-2017(Saturday)
8	Dasara Holidays	25-09-2017(Monday) to 30-09-2017(Saturday)
9	Submission of return of Matriculates	15-09-2017(Friday)



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10	Commencement of 2 nd internal exams for I,III,V & semesters	04-10-2017(Wednesday)
11	Examination and last date for payments of fee I,III & V Semesters	19-09-2017 to 10-10-2017 (Tuesday) (Tuesday)
12	Commencement of Practical examinations for I,III & V semesters	16-10-2017 (Monday)
13	Commencement of End Semesters examinations for I,III & V semesters	25-10-2017 to 20-11-2017 (Wednesday) (Monday)

II, IV, VI SEMESTERS

14	Commencement of Class for II,IV,VI Semester	23-11-2017 (Thursday)
15	Sankranti Holidays	12-01-2018 to 17-01-2018 (Friday) (Wednesday)
16	Commencement of I st internal exams for II,IVI & semesters	18-01-2018 (Thurs day)
17	Exam notification and last date for payments of fee II,IV & VI Semesters & Supplementary candidates of annual pattern	09-02-2018 to 28-02-2018 (Friday) (Wednesday)
18	Commencement of 2nd Practical exams for II,IVI & semesters	01-03-2018 (Thursday)
19	Commencement of Practical examinations for II,IV, & VI semesters & Supplementary candidates of annual pattern	10-03-2018 (Saturday)
20	Commencement of End Semesters examinations for II,IV, & VI semesters and Theory examinations for supplementary candidates of annual pattern	20-03-2018 (Tuesday)
21	Last working day of the academic year 2017-2018	13-04-2018 (Friday)
22	Reopening of the college after summer vacation for the next academic year i.e 2018-2019	05-06-2018 (Monday)



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Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose, galctose
Additional inputs	applications Of carbohydrates in human body
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Paper-VI
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein in blood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-II, Papers- II
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	14 h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications.
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm. Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO HSAB concept
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	EM-II, Paper- II
Name of the Topic	Stereo chemistry of carbon compounds
Hours required	10h
Learning objectives	To gain Knowledge related .Different configurations of organic compounds .
Previous knowledge to be reminded	Geometrical isomerism
Topic Synopsis	Molecular representations, Wedge, Fischer, Newman and Saw-Horse formulae. Optical isomerism: Optical activity and specific reactions. Definition of enantiomers , and diastereomers Optical isomerism with Glyceraldehyde, Lactic acid. Alanine, Tartaric acid D-L, R-S, and E-Z configurations with examples. Recemic mixture- Resolution of recemic mixture .
Examples/Illustrations	Different types of molecules
Additional inputs	Geometrical and optical isomerism in complexes
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solid State
Hours required	10 h
Learning objectives	To gain Knowledge related to symmetry in crystal systems, Determination of structure of the crystal and defects in stoichiometric and non – stoichiometric crystals.
Previous knowledge to be reminded	Properties of solids , liquids and gases
Topic Synopsis	Symmetry in crystals. Law of constancy of inter facial angles. The law of rationality of indices . Miller indices. Definition of space lattice, Latice point, Unit cell.Braggs equation power method defects in crystals stoichiometric and non – stoichiometric crystals.
Examples/Illustrations	NaCL,CSCl etc
Additional inputs	Difference between solid , liquid and gases in terms of inter molecular interactions.
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Gases states and Liquid states
Hours required	10h
Learning objectives	To gain Knowledge about Vanderwaals equations, critical phenomena, relation ship between critical constants and Vanderwaals constants, aplications of liquid crystals as LCD devices
Previous knowledge to be reminded	Gas laws , Ideal gas equation
Topic Synopsis	Gses state : Vanderwaals equations, Isotherms of carbondi oxide, critical phenomena, relation ship between critical constants and Vanderwaals constants. Law of corresponding states . Joule-Thomsons effect. Liquid state : Classification of liquid crystals and applications . Meso morphic state.
Examples/Illustrations	Smectic and nematic crystals
Additional inputs	Liqui faction of gases
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solutions, Ionic equilibrium and dilute solutions
Hours required	16h
Learning objectives	To gain Knowledge about related to azeotropes, CST, Distribution law and applications, solubility product and common ion effect, colligative properties.
Previous knowledge to be reminded	Solutions – Raoult's law
Topic Synopsis	Solutions : azeotropes, partially miscible liquids CST Nernst distribution law and applications. Ionic equilibrium: Common Ion effect and solubility property. dilute solutions: Colligative properties – Vanthoff factor
Examples/Illustrations	Phenol – Water , Ethanol – Water , Nicotine – Water systems
Additional inputs	Solvent extraction and its applications Common Ion effect applications in qualitative and Quantitative analysis
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	I BZC ,BHC(EM)
Paper	I
Name of the topic	d-block elements
Hours Required	8h
Learning Objectives	Special Properties of d-block elements , Electronic configuration,oxidation states,complex formation,catalytic properties
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency, magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify The doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC,BHC(EM)
Paper	I
Name of the topic	f-block elements
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	IBZC, BHC(EM)
Paper	I
Name of the topic	Theories of bonding in metals
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC(EM)
Paper	III
Name of the topic	Metal carbonyls
Hours Required	8h
Learning Objectives	EAN, Structures of metalcarbonyls.
Previous Knowledge to be Reminded	Metals of d-block elements
Topic synopsis	Metal carbonyls-classification, effective atomic number, structure of vanadium carbonyls, chromium carbonyls, manganese carbonyls, cobalt carbonyl, iron carbonyl and nickelcarbonyl.
Examples/Illustrations	For complexes, para, dia, ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2021-2022-January-2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS CHEMICAL KINETICS & THERMODYNAMICS
Hours Required	18+20hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand the importance of Thermodynamics in day-to-day life. To understand rate of reactions.
Previous Knowledge to be reminded	Organic functional groups Terms involved in Thermodynamics, Laws of Thermodynamics Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of ketones from nitriles and from carboxylic acids. ➤ Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy. ➤ Rate of reaction - Definition of order and molecularity.
Examples/Illustrations	Structure of carbonyl compounds, Carnot Engine
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Slip test, Quiz, Assignment. Second internal Exams
Activity Planned outside the class room, if any	Problems on nomenclature of carbonyl compounds and thermodynamics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2021-2022-February-2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS & CHEMICAL KINETICS
Hours Required	18+18 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand rate of reactions and rate constant of zero, first and second order reactions.
Previous Knowledge to be reminded	Organic functional groups & their properties Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Physical properties: Reactivity of carbonyl group in aldehydes and ketones. Nucleophilic addition reaction with a) NaHSO₃, b) HCN, c) RMgX, d) NH₂OH, e) PhNHNH₂, f) 2,4 DNPH, g) Alcohols-(formation of hemiacetal and acetal). Base catalysed reactions: Oxidation of aldehydes - Baeyer-Villiger oxidation of ketones. Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH₄ and NaBH₄ ➤ Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.
Examples/Illustrations	$\text{H}_2 + \text{Cl}_2 \xrightarrow{\text{h}\nu} 2\text{HCl}$ $\text{C}_2\text{H}_5\text{COOCH}_3 + \text{H}_2\text{O} \longrightarrow \text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH}$ $\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{C}_6\text{H}_{12}\text{O}_6$
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal

	II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars & Practical exams
Activity Planned outside the class room, if any	Home assignments and problems on chemical kinetics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2021-2022-March-2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	I BMC & I BT
Paper(s)	I
Name of the Topic/ Unit/Paper	SOLID STATE, LIQUID STATE AND GASEOUS STATE
Hours Required	20 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties Solids, liquids and Gases
Previous Knowledge to be reminded	Solids, liquids and gases, Their properties
Topic Synopsis	➤ Solid State: Symmetry in crystals, Law of rationality of indices, The law of symmetry, Miller indices, Definition of lattice point, space lattice, unit cell, Bravais lattices and crystal systems, X-ray diffraction and crystal structure. Bragg's law, powder method, Defects in crystals, stoichiometric and nonstoichiometric defects. ➤ Gaseous state: van Der Waal's equation of state, Andrew's isotherms of CO₂, Continuity of state. Critical phenomena, Relationship between critical constants and van Der Waal's constants, Law of corresponding states, Joule-Thomson effect, inversion temperature. ➤ Liquid state: Liquid crystals, mesomorphic state. Differences between liquid crystal and solid crystal. Classification of liquid crystals into Smectic and Nematic: Application of liquid crystals as LCD devices.
Examples/Illustrations	Charts and models
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal I B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars, III & V semester end examinations
Activity Planned outside the class room, if any	Home assignments

Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN YEAR 2021-2022

MONTH: April - 2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Dilute solutions-Colligative properties 2. Chemical Toxicology 3. Analysis of oils & industrial solvents 4. Analysis of fertilizers & polysaccharides
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand the Raoult's law, lowering of vapor pressure, elevation in B.P, depression in F.P, osmotic pressure • To understand the toxicity of metals and pesticides on the environment • To understand the analysis of oils & solvents • To Understand the analysis of fertilizers and polysaccharides
Previous Knowledge to be reminded	Solutions, Elements of the periodic table, structure of oils and fats, properties of solvents, sugars etc.,
Topic Synopsis	➤ Relative lowering of vapor pressure, Raoult's law, relation between vapor pressure and molecular weight of the solute, Elevation in boiling point, experimental determination, Depression in freezing point, Beckman method, Osmotic pressure, Berkeley and Hartley method, Vant Hoff's theory of dilute solutions. ➤ Toxic Chemicals in the environment, effects of toxic chemicals, cyanide & its effects, Pesticides & its biochemical effects, Toxicity of lead, mercury, arsenic and cadmium. ➤ Analysis of oils, saponification value, iodine value, ester value, acetyl value, Analysis of industrial solvents like benzene, acetone, methanol and acetic acid. ➤ Analysis of fertilizers: urea, NPK fertilizer, Super phosphate ➤ Analysis of DDT, BHC, endrin, Endo sulfone, ➤ Analysis of starch, sugars, cellulose and paper. ➤
Examples/Illustrations	Models, Examples, Fun facts etc.,
Additional Inputs	Determination of Boiling point, Uses of Applied industrial products
Teaching Aids used	Black board & chalk; Power point

References cited	Chemistry text book by O.P.Agarwal, Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN YEAR 2021-2022 MONTH: May - 2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-I 2. Ecosystem 3. Gas Analysis 4. Analysis of Soaps& paints
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Types of conductance, Kohlrausch's law, Arrhenius theory, Debye-Huckel-Onsagerequation, Transport number. • To understand the Ecosystem and biodiversity • To understand the analysis of gases & fuels • To Understand the analysis of Soaps & paints
Previous Knowledge to be reminded	Conductance definition, effect of temperature on conductance, ohms law, Titrations types.structure of oils and fats, properties of gases, fuel etc.,
Topic Synopsis	➤ Specific conductance, Equivalent conductance, effect of dilution, Migration of ions, Kohlrausch's lawArrhenius theory, Ostwald's law, Debye Huckel theory of strong electrolytes,Transport number, determinationby Hittorf's method. Application of conductivity measurements ➤ Ecosystem-concepts, functions, types of ecosystems, biotic and abiotic environment, food chain, food web, tropic levels, energy flow, biogeochemical cycles. ➤ Cluster A3: Gas Analysis- CO₂, O₂, H₂, Unsaturated hydrocarbons, N₂, Octane number and cetane number. ➤ Analysis of Fuel gases like water gas, producer gas, kerosene(oil) gas ➤ Ultimate analysis: Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur.
Examples/Illustrations	Acid Base Theory, Models, Examples, Fun facts etc.,
Additional Inputs	Conductometric titrations, Uses of Applied industrial products
Teaching Aids used	Offline& Online Class: Cisco webex, zoom class, Power point
References cited	Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer**Signature of the I/C of Dept.**

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN YEAR 2021-2022****MONTH: June - 2022**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-II, phase rule 2. Environmental chemistry & pollution 3. Analysis of Soaps& paints 4. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.

Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN****YEAR 2021-2022****MONTH: July - 2022**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B. Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	5. Electrochemistry-II, phase rule 6. Environmental chemistry & pollution 7. Analysis of Soaps& paints 8. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.

Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :		CHEMISTRY
Name of the Lecturer:		J. MARY SUGUNA
Course/Group:		III BSc MPC,BZC,BT
Paper:		SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes	
Hours required	3	
Learning objectives	To gain Knowledge about Stability of Compounds	
Previous knowledge to be reminded	Transition metals	
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method	
Examples/Illustrations	Complexes of Pt, Cu, Zn etc	
Additional inputs	Uses and applications of complexes	
Teaching Aids used	Black Board	
References Cited	A Text Book of Coordination chemistry	
Student Activity Planned after the Teaching	Question & answers	
Activity Planned outside the Class room, if any	Slip test	
Any other activity		

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC, BT & BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC,BT &BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group.	I BT & BMC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds .
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-rato method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine-syntesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :		CHEMISTRY
Name of the Lecturer:		Dr.A.L.V. Ramana Reddy
Course/Group:		III BSc ,BZC
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose,galctose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.MADHAVI
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,michael addition,mannich reaction leading to michael addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	SPECTROSCOPY
Hours Required	8h
Learning Objectives	To gain knowledge about EMR, single beam and double beam spectrophotometers, Beer-lamberts law and its applications
Previous Knowledge to be Reminded	Wave dual nature
Topic synopsis	EMR ,single beam and double beam spectrophotometers, beer- lamberts law and its applications
Examples/Illustrations	U.V Visible, IR, Radio waves
Additional inputs	Functional group identification region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Electronic Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about types of molecular spectra, selection rules for spectra
Previous Knowledge to be Reminded	Energy levels of molecular orbitals
Topic synopsis	Types of molecular spectra, selection rules for spectra, types of electronic molecular spectra concept of chromophore and auxochrome.
Examples/Illustrations	Beta- carotene
Additional inputs	Alpha, beta unsaturated compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	You tube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Infra red Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about IR region, modes of vibrations in poly atomic molecules
Previous Knowledge to be Reminded	Types of atomic molecules
Topic synopsis	IR Region, modes of vibrations in poly atomic molecules Absorption band of various functional groups, Interpretation of spectra.
Examples/Illustrations	Poly atomic molecules
Additional inputs	Finger print region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC (TM)
Paper	IV
Name of the topic	NMR Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about principles of NMR, chemical shift, applications of NMR with example
Previous Knowledge to be Reminded	Different types of waves
Topic synopsis	Principles of NMR chemical shift splitting of signals, coupling constant, applications of NMR with examples
Examples/Illustrations	Ethyl alcohol, Ethyl methyl ketone, Aniline
Additional inputs	Splitting of signals in different compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	To encourage the students to watch LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper-IV
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein inblood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of O.P Agarwal
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines aliphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines Diazonium salts- preparations and synthetic applications.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	DYES-Fractional distillations
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	Applications of Heterocylics in various compounds
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2021-2022

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Papers- IV
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose, galctose
Additional inputs	applications Of carbohydrates in human body
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Paper-VI
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein in blood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-II, Papers- II
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	14 h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications.
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm. Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO HSAB concept
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	EM-II, Paper- II
Name of the Topic	Stereo chemistry of carbon compounds
Hours required	10h
Learning objectives	To gain Knowledge related .Different configurations of organic compounds .
Previous knowledge to be reminded	Geometrical isomerism
Topic Synopsis	Molecular representations, Wedge, Fischer, Newman and Saw-Horse formulae. Optical isomerism: Optical activity and specific reactions. Definition of enantiomers , and diastereomers Optical isomerism with Glyceraldehyde, Lactic acid. Alanine, Tartaric acid D-L, R-S, and E-Z configurations with examples. Recemic mixture- Resolution of recemic mixture .
Examples/Illustrations	Different types of molecules
Additional inputs	Geometrical and optical isomerism in complexes
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solid State
Hours required	10 h
Learning objectives	To gain Knowledge related to symmetry in crystal systems, Determination of structure of the crystal and defects in stoichiometric and non – stoichiometric crystals.
Previous knowledge to be reminded	Properties of solids , liquids and gases
Topic Synopsis	Symmetry in crystals. Law of constancy of inter facial angles. The law of rationality of indices . Miller indices. Definition of space lattice, Latice point, Unit cell.Braggs equation power method defects in crystals stoichiometric and non – stoichiometric crystals.
Examples/Illustrations	NaCL,CSCl etc
Additional inputs	Difference between solid , liquid and gases in terms of inter molecular interactions.
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.Ch.Sravanthi
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Gases states and Liquid states
Hours required	10h
Learning objectives	To gain Knowledge about Vanderwaals equations, critical phenomena, relation ship between critical constants and Vanderwaals constants, applicatios of liquid crystals as LCD devices
Previous knowledge to be reminded	Gas laws , Ideal gas equation
Topic Synopsis	Gses state : Vanderwaals equations, Isotherms of carbondi oxide, critical phenomena, relation ship between critical constants and Vanderwaals constants. Law of corresponding states . Joule-Thomsons effect. Liquid state : Classification of liquid crystals and applications . Meso morphic state.
Examples/Illustrations	Smectic and nematic crystals
Additional inputs	Liqui faction of gases
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.Ch.Sravanthi
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solutions, Ionic equilibrium and dilute solutions
Hours required	16h
Learning objectives	To gain Knowledge about related to azeotropes, CST, Distribution law and applications, solubility product and common ion effect, colligative properties.
Previous knowledge to be reminded	Solutions – Raoult's law
Topic Synopsis	Solutions : azeotropes, partially miscible liquids CST Nernst distribution law and applications. Ionic equilibrium: Common Ion effect and solubility property. dilute solutions: Colligative properties – Vanthoff factor
Examples/Illustrations	Phenol – Water , Ethanol – Water , Nicotine – Water systems
Additional inputs	Solvent extraction and its applications Common Ion effect applications in qualitative and Quantitative analysis
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	I BZC ,BHC(EM)
Paper	I
Name of the topic	d-block elements
Hours Required	8h
Learning Objectives	Special Properties of d-block elements , Electronic configuration,oxidation states,complex formation,catalytic properties
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency, magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify The doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC,BHC(EM)
Paper	I
Name of the topic	f-block elements
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	IBZC, BHC(EM)
Paper	I
Name of the topic	Theories of bonding in metals
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC(EM)
Paper	III
Name of the topic	Metal carbonyls
Hours Required	8h
Learning Objectives	EAN, Structures of metalcarbonyls.
Previous Knowledge to be Reminded	Metals of d-block elements
Topic synopsis	Metal carbonyls-classification, effective atomic number, structure of vanadium carbonyls, chromium carbonyls, manganese carbonyls, cobalt carbonyl, iron carbonyl and nickelcarbonyl.
Examples/Illustrations	For complexes, para, dia, ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS CHEMICAL KINETICS & THERMODYNAMICS
Hours Required	18+20hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand the importance of Thermodynamics in day-to-day life. To understand rate of reactions.
Previous Knowledge to be reminded	Organic functional groups Terms involved in Thermodynamics, Laws of Thermodynamics Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of ketones from nitriles and from carboxylic acids. ➤ Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy. ➤ Rate of reaction - Definition of order and molecularity.
Examples/Illustrations	Structure of carbonyl compounds, Carnot Engine
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Slip test, Quiz, Assignment. Second internal Exams
Activity Planned outside the class room, if any	Problems on nomenclature of carbonyl compounds and thermodynamics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS & CHEMICAL KINETICS
Hours Required	18+18 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand rate of reactions and rate constant of zero, first and second order reactions.
Previous Knowledge to be reminded	Organic functional groups & their properties Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Physical properties: Reactivity of carbonyl group in aldehydes and ketones. Nucleophilic addition reaction with a) NaHSO_3, b) HCN, c) RMgX, d) NH_2OH, e) PhNHNH_2, f) 2,4 DNPH, g) Alcohols-(formation of hemiacetal and acetal). Base catalysed reactions: Oxidation of aldehydes - Baeyer-Villiger oxidation of ketones. Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH_4 and NaBH_4 ➤ Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.
Examples/Illustrations	$\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ $\text{C}_2\text{H}_5\text{COOCH}_3 + \text{H}_2\text{O} \longrightarrow \text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH}$ $\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{C}_6\text{H}_{12}\text{O}_6$
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.

References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars & Practical exams
Activity Planned outside the class room, if any	Home assignments and problems on chemical kinetics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN: YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	I BMC & I BT
Paper(s)	I
Name of the Topic/ Unit/Paper	SOLID STATE, LIQUID STATE AND GASEOUS STATE
Hours Required	20 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties Solids, liquids and Gases
Previous Knowledge to be reminded	Solids, liquids and gases, Their properties
Topic Synopsis	➤ Solid State: Symmetry in crystals, Law of rationality of indices, The law of symmetry, Miller indices, Definition of lattice point, space lattice, unit cell, Bravais lattices and crystal systems, X-ray diffraction and crystal structure. Bragg's law, powder method, Defects in crystals, stoichiometric and nonstoichiometric defects. ➤ Gaseous state: van Der Waal's equation of state, Andrew's isotherms of CO₂, Continuity of state. Critical phenomena, Relationship between critical constants and van Der Waal's constants, Law of corresponding states, Joule-Thomson effect, inversion temperature. ➤ Liquid state: Liquid crystals, mesomorphic state. Differences between liquid crystal and solid crystal. Classification of liquid crystals into Smectic and Nematic: Application of liquid crystals as LCD devices.
Examples/Illustrations	Charts and models
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal I B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars, III & V semester end examinations

Activity Planned outside the class room, if any	Home assignments
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Dilute solutions-Colligative properties 2. Chemical Toxicology 3. Analysis of oils & industrial solvents 4. Analysis of fertilizers & polysaccharides
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand the Raoult's law, lowering of vapor pressure, elevation in B.P, depression in F.P, osmotic pressure • To understand the toxicity of metals and pesticides on the environment • To understand the analysis of oils & solvents • To Understand the analysis of fertilizers and polysaccharides
Previous Knowledge to be reminded	Solutions, Elements of the periodic table, structure of oils and fats, properties of solvents, sugars etc.,
Topic Synopsis	➤ Relative lowering of vapor pressure, Raoult's law, relation between vapor pressure and molecular weight of the solute, Elevation in boiling point, experimental determination, Depression in freezing point, Beckman method, Osmotic pressure, Berkeley and Hartley method, Vant Hoff's theory of dilute solutions. ➤ Toxic Chemicals in the environment, effects of toxic chemicals, cyanide & its effects, Pesticides & its biochemical effects, Toxicity of lead, mercury, arsenic and cadmium. ➤ Analysis of oils, saponification value, iodine value, ester value, acetyl value, Analysis of industrial solvents like benzene, acetone, methanol and acetic acid. ➤ Analysis of fertilizers: urea, NPK fertilizer, Super phosphate ➤ Analysis of DDT, BHC, endrin, Endo sulfone, ➤ Analysis of starch, sugars, cellulose and paper. ➤
Examples/Illustrations	Models, Examples, Fun facts etc.,

Additional Inputs	Determination of Boiling point, Uses of Applied industrial products
Teaching Aids used	Black board & chalk; Power point
References cited	Chemistry text book by O.P.Agarwal, Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-I 2. Ecosystem 3. Gas Analysis 4. Analysis of Soaps& paints
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Types of conductance, Kohlrausch's law, Arrhenius theory, Debye-Huckel-Onsagerequation, Transport number. • To understand the Ecosystem and biodiversity • To understand the analysis of gases & fuels • To Understand the analysis of Soaps & paints
Previous Knowledge to be reminded	Conductance definition, effect of temperature on conductance, ohms law, Titrations types.structure of oils and fats, properties of gases, fuel etc.,
Topic Synopsis	➤ Specific conductance, Equivalent conductance, effect of dilution, Migration of ions, Kohlrausch's lawArrhenius theory, Ostwald's law, Debye Huckel theory of strong electrolytes,Transport number, determinationby Hittorf's method. Application of conductivity measurements ➤ Ecosystem-concepts, functions, types of ecosystems, biotic and abiotic environment, food chain, food web, tropic levels, energy flow, biogeochemical cycles. ➤ Cluster A3: Gas Analysis- CO₂, O₂, H₂, Unsaturated hydrocarbons, N₂, Octane number and cetane number. ➤ Analysis of Fuel gases like water gas, producer gas, kerosene(oil) gas ➤ Ultimate analysis: Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur.
Examples/Illustrations	Acid Base Theory, Models, Examples, Fun facts etc.,
Additional Inputs	Conductometric titrations, Uses of Applied industrial products
Teaching Aids used	Offline& Online Class: Cisco webex, zoom class, Power point
References cited	Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects

Any other activity	Advised students to watch LMS videos.
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Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN YEAR 2020-2021

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-II, phase rule 2. Environmental chemistry & pollution 3. Analysis of Soaps& paints 4. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books

	A text book of environmental pollution and controlling methods by S.S. Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN****YEAR 2020-2021**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B. Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	5. Electrochemistry-II, phase rule 6. Environmental chemistry & pollution 7. Analysis of Soaps& paints 8. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products

Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :		CHEMISTRY
Name of the Lecturer:		J. MARY SUGUNA
Course/Group:		III BSc MPC,BZC,BT
Paper:		SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes	
Hours required	3	
Learning objectives	To gain Knowledge about Stability of Compounds	
Previous knowledge to be reminded	Transition metals	
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method	
Examples/Illustrations	Complexes of Pt, Cu, Zn etc	
Additional inputs	Uses and applications of complexes	
Teaching Aids used	Black Board	
References Cited	A Text Book of Coordination chemistry	
Student Activity Planned after the Teaching	Question & answers	
Activity Planned outside the Class room, if any	Slip test	
Any other activity		

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC, BT & BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC,BT &BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group.	I BT & BMC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds .
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine-syntesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galtose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.MADHAVI
Course/Group:	III BSc,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties-hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,michael addition,mannich reaction leading to michael addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	SPECTROSCOPY
Hours Required	8h
Learning Objectives	To gain knowledge about EMR, single beam and double beam spectrophotometers, Beer-lamberts law and its applications
Previous Knowledge to be Reminded	Wave dual nature
Topic synopsis	EMR ,single beam and double beam spectrophotometers, beer- lamberts law and its applications
Examples/Illustrations	U.V Visible, IR, Radio waves
Additional inputs	Functional group identification region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Electronic Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about types of molecular spectra, selection rules for spectra
Previous Knowledge to be Reminded	Energy levels of molecular orbitals
Topic synopsis	Types of molecular spectra, selection rules for spectra, types of electronic molecular spectra concept of chromophore and auxochrome.
Examples/Illustrations	Beta- carotene
Additional inputs	Alpha, beta unsaturated compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	You tube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Infra red Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about IR region, modes of vibrations in poly atomic molecules
Previous Knowledge to be Reminded	Types of atomic molecules
Topic synopsis	IR Region, modes of vibrations in poly atomic molecules Absorption band of various functional groups, Interpretation of spectra.
Examples/Illustrations	Poly atomic molecules
Additional inputs	Finger print region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC (TM)
Paper	IV
Name of the topic	NMR Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about principles of NMR, chemical shift, applications of NMR with example
Previous Knowledge to be Reminded	Different types of waves
Topic synopsis	Principles of NMR chemical shift splitting of signals, coupling constant, applications of NMR with examples
Examples/Illustrations	Ethyl alcohol, Ethyl methyl ketone, Aniline
Additional inputs	Splitting of signals in different compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	To encourage the students to watch LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper-IV
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popyptide,structure of proteins.
Examples/Illustrations	Type of protein inblood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of O.P Agarwal
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines aliphatic&aromatic-synthesis,properties,basic strength of amines,hinsberg's separation of amines Diazonium salts-preparations and synthetic applications.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	DYES-Fractional distillations
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	Applications of Heterocylics in various compounds
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2020-2021

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Papers- IV
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :		CHEMISTRY
Name of the Lecturer		Dr.K.Nafamuni Reddy
Course/Group:		III BSc,BIO
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose, galctose	
Additional inputs	applications Of carbohydrates in human body	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	Work allotted to search the Material for related topic	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Paper-VI
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein in blood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.K.Nagamuni Reddy
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.K.Nagamuni Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-II, Papers- II
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	14 h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications.
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm. Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO HSAB concept
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.Ch.Sravanthi
Course/Group.	I BZC (EM)
Paper:	EM-II, Paper- II
Name of the Topic	Stereo chemistry of carbon compounds
Hours required	10h
Learning objectives	To gain Knowledge related .Different configurations of organic compounds .
Previous knowledge to be reminded	Geometrical isomerism
Topic Synopsis	Molecular representations, Wedge, Fischer, Newman and Saw-Horse formulae. Optical isomerism: Optical activity and specific reactions. Definition of enantiomers , and diastereomers Optical isomerism with Glyceraldehyde, Lactic acid. Alanine, Tartaric acid D-L, R-S, and E-Z configurations with examples. Recemic mixture- Resolution of recemic mixture .
Examples/Illustrations	Different types of molecules
Additional inputs	Geometrical and optical isomerism in complexes
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.Ch.Sravanthi
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solid State
Hours required	10 h
Learning objectives	To gain Knowledge related to symmetry in crystal systems, Determination of structure of the crystal and defects in stoichiometric and non – stoichiometric crystals.
Previous knowledge to be reminded	Properties of solids , liquids and gases
Topic Synopsis	Symmetry in crystals. Law of constancy of inter facial angles. The law of rationality of indices . Miller indices. Definition of space lattice, Latice point, Unit cell.Braggs equation power method defects in crystals stoichiometric and non – stoichiometric crystals.
Examples/Illustrations	NaCL,CSCl etc
Additional inputs	Difference between solid , liquid and gases in terms of inter molecular interactions.
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Youtube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.Ch .Sravanthi
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Gases states and Liquid states
Hours required	10h
Learning objectives	To gain Knowledge about Vanderwaals equations, critical phenomena, relation ship between critical constants and Vanderwaals constants, aplications of liquid crystals as LCD devices
Previous knowledge to be reminded	Gas laws , Ideal gas equation
Topic Synopsis	Gses state : Vanderwaals equations, Isotherms of carbondi oxide, critical phenomena, relation ship between critical constants and Vanderwaals constants. Law of corresponding states . Joule-Thomsons effect. Liquid state : Classification of liquid crystals and applications . Meso morphic state.
Examples/Illustrations	Smectic and nematic crystals
Additional inputs	Liqui faction of gases
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J.Mary suguna
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solutions, Ionic equilibrium and dilute solutions
Hours required	16h
Learning objectives	To gain Knowledge about related to azeotropes, CST, Distribution law and applications, solubility product and common ion effect, colligative properties.
Previous knowledge to be reminded	Solutions – Raoult's law
Topic Synopsis	Solutions : azeotropes, partially miscible liquids CST Nernst distribution law and applications. Ionic equilibrium: Common Ion effect and solubility property. dilute solutions: Colligative properties – Vanthoff factor
Examples/Illustrations	Phenol – Water , Ethanol – Water , Nicotine – Water systems
Additional inputs	Solvent extraction and its applications Common Ion effect applications in qualitative and Quantitative analysis
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	youtube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	I BZC ,BHC(EM)
Paper	I
Name of the topic	d-block elements
Hours Required	8h
Learning Objectives	Special Properties of d-block elements , Electronic configuration,oxidation states,complex formation,catalytic properties
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency, magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify The doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC,MPC(EM)
Paper	I
Name of the topic	f-block elements
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	IBZC, MPC(EM)
Paper	I
Name of the topic	Theories of bonding in metals
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC(EM)
Paper	III
Name of the topic	Metal carbonyls
Hours Required	8h
Learning Objectives	EAN,Structures of metalcarbonyls.
Previous Knowledge to be Reminded	Metals of d-block elements
Topic synopsis	Metal carbonyls-classification,effective atomic number,structure of vanadium carbonyls,chromium carbonyls,manganese carbonyls,cobalt carbonyl,iron carbonyl and nickelcarbonyl.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2019-2020-January-2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS CHEMICAL KINETICS & THERMODYNAMICS
Hours Required	18+20hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand the importance of Thermodynamics in day-to-day life. To understand rate of reactions.
Previous Knowledge to be reminded	Organic functional groups Terms involved in Thermodynamics, Laws of Thermodynamics Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of ketones from nitriles and from carboxylic acids. ➤ Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy. ➤ Rate of reaction - Definition of order and molecularity.
Examples/Illustrations	Structure of carbonyl compounds, Carnot Engine
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Slip test, Quiz, Assignment. Second internal Exams
Activity Planned outside the class room, if any	Problems on nomenclature of carbonyl compounds and thermodynamics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2019-2020

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS & CHEMICAL KINETICS
Hours Required	18+18 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand rate of reactions and rate constant of zero, first and second order reactions.
Previous Knowledge to be reminded	Organic functional groups & their properties Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Physical properties: Reactivity of carbonyl group in aldehydes and ketones. Nucleophilic addition reaction with a) NaHSO₃, b) HCN, c) RMgX, d) NH₂OH, e) PhNHNH₂, f) 2,4 DNPH, g) Alcohols-(formation of hemiacetal and acetal). Base catalysed reactions: Oxidation of aldehydes - Baeyer-Villiger oxidation of ketones. Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH₄ and NaBH₄ ➤ Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.
Examples/Illustrations	$\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ $\text{C}_2\text{H}_5\text{COOCH}_3 + \text{H}_2\text{O} \longrightarrow \text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH}$ $\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{C}_6\text{H}_{12}\text{O}_6$
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.

References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars & Practical exams
Activity Planned outside the class room, if any	Home assignments and problems on chemical kinetics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN: YEAR 2019-2020

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	I BMC & I BT
Paper(s)	I
Name of the Topic/ Unit/Paper	SOLID STATE, LIQUID STATE AND GASEOUS STATE
Hours Required	20 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties Solids, liquids and Gases
Previous Knowledge to be reminded	Solids, liquids and gases, Their properties
Topic Synopsis	➤ Solid State: Symmetry in crystals, Law of rationality of indices, The law of symmetry, Miller indices, Definition of lattice point, space lattice, unit cell, Bravais lattices and crystal systems, X-ray diffraction and crystal structure. Bragg's law, powder method, Defects in crystals, stoichiometric and nonstoichiometric defects. ➤ Gaseous state: van Der Waal's equation of state, Andrew's isotherms of CO₂, Continuity of state. Critical phenomena, Relationship between critical constants and van Der Waal's constants, Law of corresponding states, Joule-Thomson effect, inversion temperature. ➤ Liquid state: Liquid crystals, mesomorphic state. Differences between liquid crystal and solid crystal. Classification of liquid crystals into Smectic and Nematic: Application of liquid crystals as LCD devices.
Examples/Illustrations	Charts and models
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal I B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars, III & V semester end examinations

Activity Planned outside the class room, if any	Home assignments
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2019-2020

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Dilute solutions-Colligative properties 2. Chemical Toxicology 3. Analysis of oils & industrial solvents 4. Analysis of fertilizers & polysaccharides
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand the Raoult's law, lowering of vapor pressure, elevation in B.P, depression in F.P, osmotic pressure • To understand the toxicity of metals and pesticides on the environment • To understand the analysis of oils & solvents • To Understand the analysis of fertilizers and polysaccharides
Previous Knowledge to be reminded	Solutions, Elements of the periodic table, structure of oils and fats, properties of solvents, sugars etc.,
Topic Synopsis	➤ Relative lowering of vapor pressure, Raoult's law, relation between vapor pressure and molecular weight of the solute, Elevation in boiling point, experimental determination, Depression in freezing point, Beckman method, Osmotic pressure, Berkeley and Hartley method, Vant Hoff's theory of dilute solutions. ➤ Toxic Chemicals in the environment, effects of toxic chemicals, cyanide & its effects, Pesticides & its biochemical effects, Toxicity of lead, mercury, arsenic and cadmium. ➤ Analysis of oils, saponification value, iodine value, ester value, acetyl value, Analysis of industrial solvents like benzene, acetone, methanol and acetic acid. ➤ Analysis of fertilizers: urea, NPK fertilizer, Super phosphate ➤ Analysis of DDT, BHC, endrin, Endo sulfone, ➤ Analysis of starch, sugars, cellulose and paper. ➤
Examples/Illustrations	Models, Examples, Fun facts etc.,

Additional Inputs	Determination of Boiling point, Uses of Applied industrial products
Teaching Aids used	Black board & chalk; Power point
References cited	Chemistry text book by O.P.Agarwal, Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2019-2020

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-I 2. Ecosystem 3. Gas Analysis 4. Analysis of Soaps& paints
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Types of conductance, Kohlrausch's law, Arrhenius theory, Debye-Huckel-Onsagerequation, Transport number. • To understand the Ecosystem and biodiversity • To understand the analysis of gases & fuels • To Understand the analysis of Soaps & paints
Previous Knowledge to be reminded	Conductance definition, effect of temperature on conductance, ohms law, Titrations types.structure of oils and fats, properties of gases, fuel etc.,
Topic Synopsis	➤ Specific conductance, Equivalent conductance, effect of dilution, Migration of ions, Kohlrausch's lawArrhenius theory, Ostwald's law, Debye Huckel theory of strong electrolytes,Transport number, determinationby Hittorf's method. Application of conductivity measurements ➤ Ecosystem-concepts, functions, types of ecosystems, biotic and abiotic environment, food chain, food web, tropic levels, energy flow, biogeochemical cycles. ➤ Cluster A3: Gas Analysis- CO₂, O₂, H₂, Unsaturated hydrocarbons, N₂, Octane number and cetane number. ➤ Analysis of Fuel gases like water gas, producer gas, kerosene(oil) gas ➤ Ultimate analysis: Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur.
Examples/Illustrations	Acid Base Theory, Models, Examples, Fun facts etc.,
Additional Inputs	Conductometric titrations, Uses of Applied industrial products
Teaching Aids used	Offline& Online Class: Cisco webex, zoom class, Power point
References cited	Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects

Any other activity	Advised students to watch LMS videos.
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Signature of the Lecturer

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Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN YEAR 2019-2020 MONTH: June - 2022

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-II, phase rule 2. Environmental chemistry & pollution 3. Analysis of Soaps& paints 4. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books

	A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

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Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN****YEAR 2019-2020**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B. Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	5. Electrochemistry-II, phase rule 6. Environmental chemistry & pollution 7. Analysis of Soaps& paints 8. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products

Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

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Signature of the Principal

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :		CHEMISTRY
Name of the Lecturer:		J. MARY SUGUNA
Course/Group:		III BSc MPC,BZC,BT
Paper:		SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes	
Hours required	3	
Learning objectives	To gain Knowledge about Stability of Compounds .	
Previous knowledge to be reminded	Transition metals	
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method	
Examples/Illustrations	Complexes of Pt, Cu, Zn etc	
Additional inputs	Uses and applications of complexes	
Teaching Aids used	Black Board	
References Cited	A Text Book of Coordination chemistry	
Student Activity Planned after the Teaching	Question & answers	
Activity Planned outside the Class room, if any	Slip test	
Any other activity		

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

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Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc MPC ,BZC, BT & BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc MPC ,BZC,BT &BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	YOUTUBE videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group.	I BT & BMC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Youtube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds .
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.Madhavi
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine-syntesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :		CHEMISTRY
Name of the Lecturer:		V.Madhavi
Course/Group:		III BSc ,BZC
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose,galctose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Youtube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :		CHEMISTRY
Name of the Lecturer:		Dr.A.L.V. Ramana Reddy
Course/Group:		III BSc ,BZC
Paper:		SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry	
Hours required	14h	
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .	
Previous knowledge to be reminded	SN1 & SN2 reactions	
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.	
Examples/Illustrations	Different types of complexes.	
Additional inputs	Chealating groups .	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	Youtube videos	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	IBSc ,BZC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Youtube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.MADHAVI
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties-hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,michael addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	SPECTROSCOPY
Hours Required	8h
Learning Objectives	To gain knowledge about EMR, single beam and double beam spectrophotometers, Beer-lamberts law and its applications
Previous Knowledge to be Reminded	Wave dual nature
Topic synopsis	EMR ,single beam and double beam spectrophotometers, beer- lamberts law and its applications
Examples/Illustrations	U.V Visible, IR, Radio waves
Additional inputs	Functional group identification region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Electronic Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about types of molecular spectra, selection rules for spectra
Previous Knowledge to be Reminded	Energy levels of molecular orbitals
Topic synopsis	Types of molecular spectra, selection rules for spectra, types of electronic molecular spectra concept of chromophore and auxochrome.
Examples/Illustrations	Beta- carotene
Additional inputs	Alpha, beta unsaturated compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	You tube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Infra red Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about IR region, modes of vibrations in poly atomic molecules
Previous Knowledge to be Reminded	Types of atomic molecules
Topic synopsis	IR Region, modes of vibrations in poly atomic molecules Absorption band of various functional groups, Interpretation of spectra.
Examples/Illustrations	Poly atomic molecules
Additional inputs	Finger print region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC (TM)
Paper	IV
Name of the topic	NMR Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about principles of NMR, chemical shift, applications of NMR with example
Previous Knowledge to be Reminded	Different types of waves
Topic synopsis	Principles of NMR chemical shift splitting of signals, coupling constant, applications of NMR with examples
Examples/Illustrations	Ethyl alcohol, Ethyl methyl ketone, Aniline
Additional inputs	Splitting of signals in different compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	To encourage the students to watch LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper-IV
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein inblood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of O.P Agarwal
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines Diazonium salts- preparations and synthetic applications.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	DYES-Fractional distilations
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch Youtube Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer	V.HIMA KUMARI
Course/Group:	II BSc MPC ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	Applications of Heterocylics in various compounds
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Papers- IV
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	G.Kavitha
Course/Group:	III BSc MPC,BZC,
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	G.Kavitha
Course/Group:	III BSc MPC,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galctose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	G.Kavitha
Course/Group:	III BSc BZC, BT
Paper:	SEM-V, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2019-2020

Name of the Department :	CHEMISTRY
Name of the Lecturer:	G.Kavitha
Course/Group:	III BSc BZC,BT
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	YOUTUBE videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose, galctose
Additional inputs	applications Of carbohydrates in human body
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Paper-VI
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein in blood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-II, Papers- II
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	14 h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications.
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm. Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO HSAB concept
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	EM-II, Paper- II
Name of the Topic	Stereo chemistry of carbon compounds
Hours required	10h
Learning objectives	To gain Knowledge related .Different configurations of organic compounds .
Previous knowledge to be reminded	Geometrical isomerism
Topic Synopsis	Molecular representations, Wedge, Fischer, Newman and Saw-Horse formulae. Optical isomerism: Optical activity and specific reactions. Definition of enantiomers , and diastereomers Optical isomerism with Glyceraldehyde, Lactic acid. Alanine, Tartaric acid D-L, R-S, and E-Z configurations with examples. Recemic mixture- Resolution of recemic mixture .
Examples/Illustrations	Different types of molecules
Additional inputs	Geometrical and optical isomerism in complexes
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solid State
Hours required	10 h
Learning objectives	To gain Knowledge related to symmetry in crystal systems, Determination of structure of the crystal and defects in stoichiometric and non – stoichiometric crystals.
Previous knowledge to be reminded	Properties of solids , liquids and gases
Topic Synopsis	Symmetry in crystals. Law of constancy of inter facial angles. The law of rationality of indices . Miller indices. Definition of space lattice, Latice point, Unit cell.Braggs equation power method defects in crystals stoichiometric and non – stoichiometric crystals.
Examples/Illustrations	NaCL,CSCl etc
Additional inputs	Difference between solid , liquid and gases in terms of inter molecular interactions.
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Gases states and Liquid states
Hours required	10h
Learning objectives	To gain Knowledge about Vanderwaals equations, critical phenomena, relation ship between critical constants and Vanderwaals constants, aplications of liquid crystals as LCD devices
Previous knowledge to be reminded	Gas laws , Ideal gas equation
Topic Synopsis	Gses state : Vanderwaals equations, Isotherms of carbondi oxide, critical phenomena, relation ship between critical constants and Vanderwaals constants. Law of corresponding states . Joule-Thomsons effect. Liquid state : Classification of liquid crystals and applications . Meso morphic state.
Examples/Illustrations	Smectic and nematic crystals
Additional inputs	Liqui faction of gases
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solutions, Ionic equilibrium and dilute solutions
Hours required	16h
Learning objectives	To gain Knowledge about related to azeotropes, CST, Distribution law and applications, solubility product and common ion effect, colligative properties.
Previous knowledge to be reminded	Solutions – Raoult's law
Topic Synopsis	Solutions : azeotropes, partially miscible liquids CST Nernst distribution law and applications. Ionic equilibrium: Common Ion effect and solubility property. dilute solutions: Colligative properties – Vanthoff factor
Examples/Illustrations	Phenol – Water , Ethanol – Water , Nicotine – Water systems
Additional inputs	Solvent extraction and its applications Common Ion effect applications in qualitative and Quantitative analysis
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	I BZC ,BHC(EM)
Paper	I
Name of the topic	d-block elements
Hours Required	8h
Learning Objectives	Special Properties of d-block elements , Electronic configuration,oxidation states,complex formation,catalytic properties
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency, magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify The doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC,BHC(EM)
Paper	I
Name of the topic	f-block elements
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	IBZC, BHC(EM)
Paper	I
Name of the topic	Theories of bonding in metals
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC(EM)
Paper	III
Name of the topic	Metal carbonyls
Hours Required	8h
Learning Objectives	EAN, Structures of metalcarbonyls.
Previous Knowledge to be Reminded	Metals of d-block elements
Topic synopsis	Metal carbonyls-classification, effective atomic number, structure of vanadium carbonyls, chromium carbonyls, manganese carbonyls, cobalt carbonyl, iron carbonyl and nickelcarbonyl.
Examples/Illustrations	For complexes, para, dia, ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2018-2019

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS CHEMICAL KINETICS & THERMODYNAMICS
Hours Required	18+20hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand the importance of Thermodynamics in day-to-day life. To understand rate of reactions.
Previous Knowledge to be reminded	Organic functional groups Terms involved in Thermodynamics, Laws of Thermodynamics Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of ketones from nitriles and from carboxylic acids. ➤ Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy. ➤ Rate of reaction - Definition of order and molecularity.
Examples/Illustrations	Structure of carbonyl compounds, Carnot Engine
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Slip test, Quiz, Assignment. Second internal Exams
Activity Planned outside the class room, if any	Problems on nomenclature of carbonyl compounds and thermodynamics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2018-2019

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS & CHEMICAL KINETICS
Hours Required	18+18 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand rate of reactions and rate constant of zero, first and second order reactions.
Previous Knowledge to be reminded	Organic functional groups & their properties Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Physical properties: Reactivity of carbonyl group in aldehydes and ketones. Nucleophilic addition reaction with a) NaHSO_3, b) HCN, c) RMgX, d) NH_2OH, e) PhNHNH_2, f) 2,4 DNPH, g) Alcohols-(formation of hemiacetal and acetal). Base catalysed reactions: Oxidation of aldehydes - Baeyer-Villiger oxidation of ketones. Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH_4 and NaBH_4 ➤ Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.
Examples/Illustrations	$\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$ $\text{C}_2\text{H}_5\text{COOCH}_3 + \text{H}_2\text{O} \longrightarrow \text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH}$ $\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{C}_6\text{H}_{12}\text{O}_6$
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.

References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars & Practical exams
Activity Planned outside the class room, if any	Home assignments and problems on chemical kinetics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN: YEAR 2018-2019

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	I BMC & I BT
Paper(s)	I
Name of the Topic/ Unit/Paper	SOLID STATE, LIQUID STATE AND GASEOUS STATE
Hours Required	20 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties Solids, liquids and Gases
Previous Knowledge to be reminded	Solids, liquids and gases, Their properties
Topic Synopsis	➤ Solid State: Symmetry in crystals, Law of rationality of indices, The law of symmetry, Miller indices, Definition of lattice point, space lattice, unit cell, Bravais lattices and crystal systems, X-ray diffraction and crystal structure. Bragg's law, powder method, Defects in crystals, stoichiometric and nonstoichiometric defects. ➤ Gaseous state: van Der Waal's equation of state, Andrew's isotherms of CO₂, Continuity of state. Critical phenomena, Relationship between critical constants and van Der Waal's constants, Law of corresponding states, Joule-Thomson effect, inversion temperature. ➤ Liquid state: Liquid crystals, mesomorphic state. Differences between liquid crystal and solid crystal. Classification of liquid crystals into Smectic and Nematic: Application of liquid crystals as LCD devices.
Examples/Illustrations	Charts and models
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal I B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars, III & V semester end examinations

Activity Planned outside the class room, if any	Home assignments
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2018-2019

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Dilute solutions-Colligative properties 2. Chemical Toxicology 3. Analysis of oils & industrial solvents 4. Analysis of fertilizers & polysaccharides
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand the Raoult's law, lowering of vapor pressure, elevation in B.P, depression in F.P, osmotic pressure • To understand the toxicity of metals and pesticides on the environment • To understand the analysis of oils & solvents • To Understand the analysis of fertilizers and polysaccharides
Previous Knowledge to be reminded	Solutions, Elements of the periodic table, structure of oils and fats, properties of solvents, sugars etc.,
Topic Synopsis	➤ Relative lowering of vapor pressure, Raoult's law, relation between vapor pressure and molecular weight of the solute, Elevation in boiling point, experimental determination, Depression in freezing point, Beckman method, Osmotic pressure, Berkeley and Hartley method, Vant Hoff's theory of dilute solutions. ➤ Toxic Chemicals in the environment, effects of toxic chemicals, cyanide & its effects, Pesticides & its biochemical effects, Toxicity of lead, mercury, arsenic and cadmium. ➤ Analysis of oils, saponification value, iodine value, ester value, acetyl value, Analysis of industrial solvents like benzene, acetone, methanol and acetic acid. ➤ Analysis of fertilizers: urea, NPK fertilizer, Super phosphate ➤ Analysis of DDT, BHC, endrin, Endo sulfone, ➤ Analysis of starch, sugars, cellulose and paper. ➤
Examples/Illustrations	Models, Examples, Fun facts etc.,

Additional Inputs	Determination of Boiling point, Uses of Applied industrial products
Teaching Aids used	Black board & chalk; Power point
References cited	Chemistry text book by O.P.Agarwal, Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2018-2019

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-I 2. Ecosystem 3. Gas Analysis 4. Analysis of Soaps& paints
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Types of conductance, Kohlrausch's law, Arrhenius theory, Debye-Huckel-Onsagerequation, Transport number. • To understand the Ecosystem and biodiversity • To understand the analysis of gases & fuels • To Understand the analysis of Soaps & paints
Previous Knowledge to be reminded	Conductance definition, effect of temperature on conductance, ohms law, Titrations types.structure of oils and fats, properties of gases, fuel etc.,
Topic Synopsis	➤ Specific conductance, Equivalent conductance, effect of dilution, Migration of ions, Kohlrausch's lawArrhenius theory, Ostwald's law, Debye Huckel theory of strong electrolytes,Transport number, determinationby Hittorf's method. Application of conductivity measurements ➤ Ecosystem-concepts, functions, types of ecosystems, biotic and abiotic environment, food chain, food web, tropic levels, energy flow, biogeochemical cycles. ➤ Cluster A3: Gas Analysis- CO₂, O₂, H₂, Unsaturated hydrocarbons, N₂, Octane number and cetane number. ➤ Analysis of Fuel gases like water gas, producer gas, kerosene(oil) gas ➤ Ultimate analysis: Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur.
Examples/Illustrations	Acid Base Theory, Models, Examples, Fun facts etc.,
Additional Inputs	Conductometric titrations, Uses of Applied industrial products
Teaching Aids used	Offline& Online Class: Cisco webex, zoom class, Power point
References cited	Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects

Any other activity	Advised students to watch LMS videos.
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Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN YEAR 2018-2019**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-II, phase rule 2. Environmental chemistry & pollution 3. Analysis of Soaps& paints 4. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books

	A text book of environmental pollution and controlling methods by S.S. Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN****YEAR 2018-2019**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B. Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	5. Electrochemistry-II, phase rule 6. Environmental chemistry & pollution 7. Analysis of Soaps& paints 8. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products

Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :		CHEMISTRY
Name of the Lecturer:		J. MARY SUGUNA
Course/Group:		III BSc MPC,BZC,BT
Paper:		SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes	
Hours required	3	
Learning objectives	To gain Knowledge about Stability of Compounds	
Previous knowledge to be reminded	Transition metals	
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method	
Examples/Illustrations	Complexes of Pt, Cu, Zn etc	
Additional inputs	Uses and applications of complexes	
Teaching Aids used	Black Board	
References Cited	A Text Book of Coordination chemistry	
Student Activity Planned after the Teaching	Question & answers	
Activity Planned outside the Class room, if any	Slip test	
Any other activity		

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose,galtose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC, BT & BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC,BT &BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group.	I BT & BMC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds .
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-rato method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine-syntesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :		CHEMISTRY
Name of the Lecturer:		Dr.A.L.V. Ramana Reddy
Course/Group:		III BSc ,BZC
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose,galctose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :		CHEMISTRY
Name of the Lecturer:		Dr.A.L.V. Ramana Reddy
Course/Group:		III BSc ,BZC
Paper:		SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry	
Hours required	14h	
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .	
Previous knowledge to be reminded	SN1 & SN2 reactions	
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.	
Examples/Illustrations	Different types of complexes.	
Additional inputs	Chealating groups .	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	LMS videos	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.MADHAVI
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties-hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	SPECTROSCOPY
Hours Required	8h
Learning Objectives	To gain knowledge about EMR, single beam and double beam spectrophotometers, Beer-lamberts law and its applications
Previous Knowledge to be Reminded	Wave dual nature
Topic synopsis	EMR ,single beam and double beam spectrophotometers, beer- lamberts law and its applications
Examples/Illustrations	U.V Visible, IR, Radio waves
Additional inputs	Functional group identification region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Electronic Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about types of molecular spectra, selection rules for spectra
Previous Knowledge to be Reminded	Energy levels of molecular orbitals
Topic synopsis	Types of molecular spectra, selection rules for spectra, types of electronic molecular spectra concept of chromophore and auxochrome.
Examples/Illustrations	Beta- carotene
Additional inputs	Alpha, beta unsaturated compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	You tube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Infra red Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about IR region, modes of vibrations in poly atomic molecules
Previous Knowledge to be Reminded	Types of atomic molecules
Topic synopsis	IR Region, modes of vibrations in poly atomic molecules Absorption band of various functional groups, Interpretation of spectra.
Examples/Illustrations	Poly atomic molecules
Additional inputs	Finger print region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC (TM)
Paper	IV
Name of the topic	NMR Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about principles of NMR, chemical shift, applications of NMR with example
Previous Knowledge to be Reminded	Different types of waves
Topic synopsis	Principles of NMR chemical shift splitting of signals, coupling constant, applications of NMR with examples
Examples/Illustrations	Ethyl alcohol, Ethyl methyl ketone, Aniline
Additional inputs	Splitting of signals in different compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	To encourage the students to watch LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper-IV
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein inblood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of O.P Agarwal
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines Diazonium salts- preparations and synthetic applications.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	DYES-Fractional distilations
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	Applications of Heterocylics in various compounds
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2018-2019

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Papers- IV
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose.
Examples/Illustrations	Dextrose,galtose
Additional inputs	Importance of carbohydrates
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	You tube videos related to carbohydrates

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- VI
Name of the Topic	Carbohydrates
Hours required	8h
Learning objectives	To gain Knowledge about glucose and fructose .
Previous knowledge to be reminded	Pyran-structure
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.
Examples/Illustrations	Dextrose, galctose
Additional inputs	applications Of carbohydrates in human body
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Paper-VI
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein in blood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	L.Sudheera
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines aliphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-II, Papers- II
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	14 h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications.
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm. Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO HSAB concept
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	EM-II, Paper- II
Name of the Topic	Stereo chemistry of carbon compounds
Hours required	10h
Learning objectives	To gain Knowledge related .Different configurations of organic compounds .
Previous knowledge to be reminded	Geometrical isomerism
Topic Synopsis	Molecular representations, Wedge, Fischer, Newman and Saw-Horse formulae. Optical isomerism: Optical activity and specific reactions. Definition of enantiomers , and diastereomers Optical isomerism with Glyceraldehyde, Lactic acid. Alanine, Tartaric acid D-L, R-S, and E-Z configurations with examples. Recemic mixture- Resolution of recemic mixture .
Examples/Illustrations	Different types of molecules
Additional inputs	Geometrical and optical isomerism in complexes
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solid State
Hours required	10 h
Learning objectives	To gain Knowledge related to symmetry in crystal systems, Determination of structure of the crystal and defects in stoichiometric and non – stoichiometric crystals.
Previous knowledge to be reminded	Properties of solids , liquids and gases
Topic Synopsis	Symmetry in crystals. Law of constancy of inter facial angles. The law of rationality of indices . Miller indices. Definition of space lattice, Latice point, Unit cell.Braggs equation power method defects in crystals stoichiometric and non – stoichiometric crystals.
Examples/Illustrations	NaCL,CSCl etc
Additional inputs	Difference between solid , liquid and gases in terms of inter molecular interactions.
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Gases states and Liquid states
Hours required	10h
Learning objectives	To gain Knowledge about Vanderwaals equations, critical phenomena, relation ship between critical constants and Vanderwaals constants, applicatios of liquid crystals as LCD devices
Previous knowledge to be reminded	Gas laws , Ideal gas equation
Topic Synopsis	Gses state : Vanderwaals equations, Isotherms of carbondi oxide, critical phenomena, relation ship between critical constants and Vanderwaals constants. Law of corresponding states . Joule-Thomsons effect. Liquid state : Classification of liquid crystals and applications . Meso morphic state.
Examples/Illustrations	Smectic and nematic crystals
Additional inputs	Liqui faction of gases
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.N.Anand Kumar Reddy
Course/Group.	I BZC (EM)
Paper:	SEM-I, Paper- I
Name of the Topic	Solutions, Ionic equilibrium and dilute solutions
Hours required	16h
Learning objectives	To gain Knowledge about related to azeotropes, CST, Distribution law and applications, solubility product and common ion effect, colligative properties.
Previous knowledge to be reminded	Solutions – Raoult's law
Topic Synopsis	Solutions : azeotropes, partially miscible liquids CST Nerst distribution law and applications. Ionic equilibrium: Common Ion effect and solubility property. dilute solutions: Colligative properties – Vanthoff factor
Examples/Illustrations	Phenol – Water , Ethanol – Water , Nicotine – Water systems
Additional inputs	Solvent extraction and its applications Common Ion effect applications in qualitative and Quantitative analysis
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	I BZC ,BHC(EM)
Paper	I
Name of the topic	d-block elements
Hours Required	8h
Learning Objectives	Special Properties of d-block elements , Electronic configuration,oxidation states,complex formation,catalytic properties
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency, magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify The doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC,BHC(EM)
Paper	I
Name of the topic	f-block elements
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	IBZC, BHC(EM)
Paper	I
Name of the topic	Theories of bonding in metals
Hours Required	8h
Learning Objectives	Special Properties of f-block elements ,Electronic configuration,Lanthanide contraction, Actinides,actinide contraction,
Previous Knowledge to be Reminded	Properties of elements in the periodic table
Topic synopsis	Valency,magnetic,catalytic,complex formation properties.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for teaching plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	Dr.K.Nagamuni Reddy
Course/Group	II BZC(EM)
Paper	III
Name of the topic	Metal carbonyls
Hours Required	8h
Learning Objectives	EAN,Structures of metalcarbonyls.
Previous Knowledge to be Reminded	Metals of d-block elements
Topic synopsis	Metal carbonyls-classification,effective atomic number,structure of vanadium carbonyls,chromium carbonyls,manganese carbonyls,cobalt carbonyl,iron carbonyl and nickelcarbonyl.
Examples/Illustrations	For complexes, para,dia,ferro magnetic materials
Additional inputs	Uses of lanthanides and actinides
Teaching Aids used	Periodic table, black board
Reeferences cited	Unified O.P.Aarwal and kalyani publications
Student activity planned after the teaching	Clarify the doubts
Activity planned outside the class room, if any	Assignment
Any other activity	Quiz on periodic table

Signature of the Lecturer

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR 2017-2018

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS CHEMICAL KINETICS & THERMODYNAMICS
Hours Required	18+20hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand the importance of Thermodynamics in day-to-day life. To understand rate of reactions.
Previous Knowledge to be reminded	Organic functional groups Terms involved in Thermodynamics, Laws of Thermodynamics Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Nomenclature of aliphatic and aromatic carbonyl compounds, structure of the carbonyl group. Synthesis of aldehydes from acid chlorides, synthesis of ketones from nitriles and from carboxylic acids. ➤ Temperature dependence of enthalpy of formation-Kirchoff's equation. Second law of thermodynamics. Different Statements of the law. Carnot cycle and its efficiency. Carnot theorem. Concept of entropy. ➤ Rate of reaction - Definition of order and molecularity.
Examples/Illustrations	Structure of carbonyl compounds, Carnot Engine
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Slip test, Quiz, Assignment. Second internal Exams
Activity Planned outside the class room, if any	Problems on nomenclature of carbonyl compounds and thermodynamics

Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH

PROFORMA FOR TEACHING PLAN: YEAR **2017-2018**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	III BMC, III BIO-TECH & II BT
Paper(s)	III, V & VI
Name of the Topic/ Unit/Paper	CARBONYL COMPOUNDS & CHEMICAL KINETICS
Hours Required	18+18 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties of carbonyl compounds To understand rate of reactions and rate constant of zero, first and second order reactions.
Previous Knowledge to be reminded	Organic functional groups & their properties Balanced chemical reactions, Rate of reaction, order and molecularity of chemical reactions
Topic Synopsis	➤ Physical properties: Reactivity of carbonyl group in aldehydes and ketones. Nucleophilic addition reaction with a) NaHSO₃, b) HCN, c) RMgX, d) NH₂OH, e) PhNHNH₂, f) 2,4 DNPH, g) Alcohols-(formation of hemiacetal and acetal). Base catalysed reactions: Oxidation of aldehydes - Baeyer-Villiger oxidation of ketones. Reduction: Clemmensen reduction, Wolf-Kishner reduction, MPV reduction, reduction with LiAlH₄ and NaBH₄ ➤ Derivation of rate constants for first, second, third and zero order reactions and examples. Derivation for time half change. Methods to determine the order of reactions. Effect of temperature on rate of reaction, Arrhenius equation, concept of activation energy.
Examples/Illustrations	$\text{H}_2 + \text{Cl}_2 \xrightarrow{\text{h}\nu} 2\text{HCl}$ $\text{C}_2\text{H}_5\text{COOCH}_3 + \text{H}_2\text{O} \longrightarrow \text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH}$ $\text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{C}_6\text{H}_{12}\text{O}_6$
Additional Inputs	Solutions for problems on physical chemistry

Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal II B.Sc Chemistry Telugu Academy III B.Sc Chemistry Telugu Academy
Students Activity Planned after the teaching	Discussion, Interactions, Seminars & Practical exams
Activity Planned outside the class room, if any	Home assignments and problems on chemical kinetics
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN: YEAR 2017-2018

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	I BMC & I BT
Paper(s)	I
Name of the Topic/ Unit/Paper	SOLID STATE, LIQUID STATE AND GASEOUS STATE
Hours Required	20 hrs
Learning Objectives Skill, Knowledge, Understanding	To understand properties Solids, liquids and Gases
Previous Knowledge to be reminded	Solids, liquids and gases, Their properties
Topic Synopsis	➤ Solid State: Symmetry in crystals, Law of rationality of indices, The law of symmetry, Miller indices, Definition of lattice point, space lattice, unit cell, Bravais lattices and crystal systems, X-ray diffraction and crystal structure. Bragg's law, powder method, Defects in crystals, stoichiometric and nonstoichiometric defects. ➤ Gaseous state: van Der Waal's equation of state, Andrew's isotherms of CO₂, Continuity of state. Critical phenomena, Relationship between critical constants and van Der Waal's constants, Law of corresponding states, Joule-Thomson effect, inversion temperature. ➤ Liquid state: Liquid crystals, mesomorphic state. Differences between liquid crystal and solid crystal. Classification of liquid crystals into Smectic and Nematic: Application of liquid crystals as LCD devices.
Examples/Illustrations	Charts and models
Additional Inputs	Solutions for problems on physical chemistry
Teaching Aids used	PPT Classes, Digital classes, using charts, regular teaching aids-Blackboard & chalk.
References cited	Unified chemistry by O P Agarwal I B.Sc Chemistry Telugu Academy

Students Activity Planned after the teaching	Discussion, Interactions, Seminars, III & V semester end examinations
Activity Planned outside the class room, if any	Home assignments
Any other activity	Students are motivated to watch videos related to subjects in youtube and CCE-LMS

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2017-2018

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Dilute solutions-Colligative properties 2. Chemical Toxicology 3. Analysis of oils & industrial solvents 4. Analysis of fertilizers & polysaccharides
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand the Raoult's law, lowering of vapor pressure, elevation in B.P, depression in F.P, osmotic pressure • To understand the toxicity of metals and pesticides on the environment • To understand the analysis of oils & solvents • To Understand the analysis of fertilizers and polysaccharides
Previous Knowledge to be reminded	Solutions, Elements of the periodic table, structure of oils and fats, properties of solvents, sugars etc.,
Topic Synopsis	➤ Relative lowering of vapor pressure, Raoult's law, relation between vapor pressure and molecular weight of the solute, Elevation in boiling point, experimental determination, Depression in freezing point, Beckman method, Osmotic pressure, Berkeley and Hartley method, Vant Hoff's theory of dilute solutions. ➤ Toxic Chemicals in the environment, effects of toxic chemicals, cyanide & its effects, Pesticides & its biochemical effects, Toxicity of lead, mercury, arsenic and cadmium. ➤ Analysis of oils, saponification value, iodine value, ester value, acetyl value, Analysis of industrial solvents like benzene, acetone, methanol and acetic acid. ➤ Analysis of fertilizers: urea, NPK fertilizer, Super phosphate

	➤ Analysis of DDT, BHC, endrin, Endo sulfone, ➤ Analysis of starch, sugars, cellulose and paper. ➤
Examples/Illustrations	Models, Examples, Fun facts etc.,
Additional Inputs	Determination of Boiling point, Uses of Applied industrial products
Teaching Aids used	Black board & chalk; Power point
References cited	Chemistry text book by O.P.Agarwal, Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer **Signature of the I/C of Dept.**

Signature of the Principal

**COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA
PRADESH**

PROFORMA FOR TEACHING PLAN YEAR 2017-2018

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-I 2. Ecosystem 3. Gas Analysis 4. Analysis of Soaps& paints
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Types of conductance, Kohlrausch's law, Arrhenius theory, Debye-Huckel-Onsagerequation, Transport number. • To understand the Ecosystem and biodiversity • To understand the analysis of gases & fuels • To Understand the analysis of Soaps & paints
Previous Knowledge to be reminded	Conductance definition, effect of temperature on conductance, ohms law, Titrations types.structure of oils and fats, properties of gases, fuel etc.,

Topic Synopsis	➤ Specific conductance, Equivalent conductance, effect of dilution, Migration of ions, Kohlrausch's law Arrhenius theory, Ostwald's law, Debye Huckel theory of strong electrolytes, Transport number, determination by Hittorf's method. Application of conductivity measurements ➤ Ecosystem-concepts, functions, types of ecosystems, biotic and abiotic environment, food chain, food web, trophic levels, energy flow, biogeochemical cycles. ➤ Cluster A3: Gas Analysis- CO₂, O₂, H₂, Unsaturated hydrocarbons, N₂, Octane number and cetane number. ➤ Analysis of Fuel gases like water gas, producer gas, kerosene(oil) gas ➤ Ultimate analysis: Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur.
Examples/Illustrations	Acid Base Theory, Models, Examples, Fun facts etc.,
Additional Inputs	Conductometric titrations, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco webex, zoom class, Power point
References cited	Telugu academy text books
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer **Signature of the I/C of Dept.**

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN YEAR 2017-2018**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B.Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	1. Electrochemistry-II, phase rule 2. Environmental chemistry & pollution 3. Analysis of Soaps& paints 4. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point
References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara

Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION, ANDHRA PRADESH**PROFORMA FOR TEACHING PLAN****YEAR 2017-2018**

Name of the Department	CHEMISTRY
Name of the Lecturer	WINNIE TEJA D
Course/Group	II MPC, III Biotech, III BMC and III B. Sc Cluster
Paper(s)	IV, VII & VIII
Name of the Topic/ Unit/Paper	5. Electrochemistry-II, phase rule 6. Environmental chemistry & pollution 7. Analysis of Soaps& paints 8. Analysis of complex materials
Hours Required	8h+12h+12h
Learning Objectives Skill, Knowledge, Understanding	• To understand Electrode potential, Reference electrodes. • To understand the Ecosystem and biodiversity • To understand the analysis of Soaps& paints • To Understand the analysis of complex materials
Previous Knowledge to be reminded	Electrode potentials, pollutants, structure of oils & fats, composition of cement & glass.
Topic Synopsis	➤ Single electrode potential, Reversible and Irreversible electrodes, Hydrogen electrode and Calomel electrodes ➤ Concept of Phase, component, degrees of freedom, Phase rule application to one component system water system, two component systems Ag-Pb and Salt water system ➤ Environmental Chemistry: Concept-Scope and importance, Nomenclature of environmental chemistry-segments of environment, natural resources-Renewable and non-renewable resources, reactions of atmospheric oxygen and hydrological cycle. ➤ Air Pollution: Definition-sources of air pollution-classification of air pollution-acid rain-photo chemical smog-green house effect-formation and depletion of ozone-Bhopal gas disaster-controlling methods of air pollution.
Examples/Illustrations	pollutants, Models, Examples, Fun facts etc.,
Additional Inputs	Phases and components, Uses of Applied industrial products
Teaching Aids used	Offline & Online Class: Cisco Webex, zoom class, Power point

References cited	Telugu academy text books A text book of environmental pollution and controlling methods by S.S.Dara
Students Activity Planned after the teaching	Question & answer, Discussion.
Activity Planned outside the class room, if any	Assignments. Problems and projects
Any other activity	Advised students to watch LMS videos.

Signature of the Lecturer

Signature of the I/C of Dept.

Signature of the Principal

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	III BSc MPC,BZC,BT
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :		CHEMISTRY
Name of the Lecturer:		J. MARY SUGUNA
Course/Group:		III BSc MPC,BZC
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose,galctose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC, BT & BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group:	II BSc BHC ,BZC,BT &BMC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	J. MARY SUGUNA
Course/Group.	I BT & BMC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- V
Name of the Topic	Stability of Metal Complexes
Hours required	3
Learning objectives	To gain Knowledge about Stability of Compounds .
Previous knowledge to be reminded	Transition metals
Topic Synopsis	Thermodynamic stability and Kinetic stability factors affecting stability of complexes Job's method and mole-ratio method
Examples/Illustrations	Complexes of Pt, Cu, Zn etc
Additional inputs	Uses and applications of complexes
Teaching Aids used	Black Board
References Cited	A Text Book of Coordination chemistry
Student Activity Planned after the Teaching	Question & answers
Activity Planned outside the Class room, if any	Slip test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper- VI
Name of the Topic	Reactivity of Metal complexes
Hours required	4h
Learning objectives	To gain Knowledge about Labile and Inert complexes-SN and SN substitution reaction of square planar complexes .
Previous knowledge to be reminded	Organic reactions
Topic Synopsis	Substitution reaction in octahedral and square planar complexes trans effect and applications of trans effect
Examples/Illustrations	Complexes of Pt
Additional inputs	Cis –Trans isomerism
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of chemistry by O.P.Agarwal
Student Activity Planned after the Teaching	Question and Answers
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Paper-VI
Name of the Topic	Bioinorganic chemistry
Hours required	4
Learning objectives	To gain Knowledge about Essential and their importance .
Previous knowledge to be reminded	Haemoglobin,
Topic Synopsis	Essential Elements, biological importance of Na, K, Mg, Fe, Co, Ni, Cu, Zn and Cl Metallomorphins-structure of Haemoglobin and Chlorophyll.
Examples/Illustrations	
Additional inputs	Photosensitized reactons
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of Chemistry by Kalyani publications.
Student Activity Planned after the Teaching	Clarification of doubts
Activity Planned outside the Class room, if any	Slip-test
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM- V, Papers- VI
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine-syntesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :		CHEMISTRY
Name of the Lecturer:		Dr.A.L.V. Ramana Reddy
Course/Group:		III BSc ,BZC
Paper:		SEM- V, Papers- VI
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucote-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose,glucose-mannose.	
Examples/Illustrations	Dextrose,galtose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Co ordination chemistry
Hours required	12h
Learning objectives	To gain Knowledge about complexes and their uses .
Previous knowledge to be reminded	D block elements properties
Topic Synopsis	.IUPAC Nomenclature of coordination compounds ,structural and stereo isomerism in complexes with coordination number 4&6, Valence bond theory CFT, CFSE factors affecting the magnitude of crystal field splitting energy, spectrochemical series distortion of octahedral geometry John teller distortion..
Examples/Illustrations	Co, Cr, Pt, Ni complexes.
Additional inputs	Applications of complexes .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-IV, Paper- V
Name of the Topic	Inorganic reaction mechanisms, stability of metal complexes, Bio inorganic chemistry
Hours required	14h
Learning objectives	To gain Knowledge related inorganic reaction mechanisms .
Previous knowledge to be reminded	SN1 & SN2 reactions
Topic Synopsis	Introduction to Inorganic reaction mechanisms, concept of reaction pathway, transition state, intermediate and activated complex, labile and inert complexes, ligand substitution reactions SN1 & SN2 reactions, substitution reactions thermodynamic, and kinetic stability, factors affecting stability, chealate effect, jobs method, and mole ratio method, Importance of metals in Biological systems.
Examples/Illustrations	Different types of complexes.
Additional inputs	Chealating groups .
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	Dr.A.L.V. Ramana Reddy
Course/Group:	III BSc ,BZC
Paper:	SEM-I, Paper-I
Name of the Topic	Surface chemistry and chemical bonding, HSAB
Hours required	6h
Learning objectives	To gain Knowledge related Colloids, adsorption and their applications .
Previous knowledge to be reminded	Solutions
Topic Synopsis	Colloids: Coagulation of colloids, Hardy-Schulze rule. Stability of colloids, gold number. Adsorption: physical and chemical adsorption. Langmuir adsorption isotherm . Applications Chemical bonding: Valence bond theory applied to ClF_3 , $\text{Ni}(\text{CO})_4$, Molecular Orbital theory construction of N_2 , O_2 , CO & NO
Examples/Illustrations	Different types of molecules
Additional inputs	Differences between VBT & MOT .
Teaching Aids used	PPT & Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Seminars
Any other activity	LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.MADHAVI
Course/Group:	III BSc,BIO
Paper:	SEM- V, Papers- V
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties-hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,michael addition,mannich reaction leading to michael addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	SPECTROSCOPY
Hours Required	8h
Learning Objectives	To gain knowledge about EMR, single beam and double beam spectrophotometers, Beer-lamberts law and its applications
Previous Knowledge to be Reminded	Wave dual nature
Topic synopsis	EMR ,single beam and double beam spectrophotometers, beer- lamberts law and its applications
Examples/Illustrations	U.V Visible, IR, Radio waves
Additional inputs	Functional group identification region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts,question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Electronic Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about types of molecular spectra, selection rules for spectra
Previous Knowledge to be Reminded	Energy levels of molecular orbitals
Topic synopsis	Types of molecular spectra, selection rules for spectra, types of electronic molecular spectra concept of chromophore and auxochrome.
Examples/Illustrations	Beta- carotene
Additional inputs	Alpha, beta unsaturated compounds
Teaching Aids used	Blackboard
References cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	You tube videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC(TM)
Paper	IV
Name of the topic	Infra red Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about IR region, modes of vibrations in poly atomic molecules
Previous Knowledge to be Reminded	Types of atomic molecules
Topic synopsis	IR Region, modes of vibrations in poly atomic molecules Absorption band of various functional groups, Interpretation of spectra.
Examples/Illustrations	Poly atomic molecules
Additional inputs	Finger print region
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	Work allotted to search the material for related topics

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department/subject	Chemistry
Name of the Lecturer	V.MADHAVI
Course/Group	II BZC (TM)
Paper	IV
Name of the topic	NMR Spectroscopy
Hours Required	8h
Learning Objectives	To gain knowledge about principles of NMR, chemical shift, applications of NMR with example
Previous Knowledge to be Reminded	Different types of waves
Topic synopsis	Principles of NMR chemical shift splitting of signals, coupling constant, applications of NMR with examples
Examples/Illustrations	Ethyl alcohol, Ethyl methyl ketone, Aniline
Additional inputs	Splitting of signals in different compounds
Teaching Aids used	Blackboard
Reeferences cited	Text book of Y.R sharma
Student activity planned after the teaching	Clarify the doubts, question and answers
Activity planned outside the class room, if any	Assignment
Any other activity	To encourage the students to watch LMS videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper-IV
Name of the Topic	Amino acids and proteins
Hours required	7h
Learning objectives	To gain Knowledge about various types of amino acids and structure of protein
Previous knowledge to be reminded	Amines
Topic Synopsis	Classification,synthesis,zwitter ion,isoelectric point,properties related to amino group,related to acidic group,proteins-popypetide,structure of proteins.
Examples/Illustrations	Type of protein inblood
Additional inputs	Applications
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of O.P Agarwal
Student Activity Planned after the Teaching	Seminar
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrohydrocarbons
Hours required	3h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	About hydrocarbons
Topic Synopsis	Nomenclature,structure of nitro group,tautomerism,methods to synthesis,properties- hydrolysis,halogenations,victor mayer test,nef reaction,mannich reaction,micheal addition,mannich reaction leading to micheal addition,reduction.
Examples/Illustrations	Nitro methane,nitroethane,nitro benzene
Additional inputs	Mechanisms of nef reaction
Teaching Aids used	Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	Watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer:	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Nitrogen Compounds
Hours required	12h
Learning objectives	To gain Knowledge about .
Previous knowledge to be reminded	Ammonia and its structure
Topic Synopsis	Amines alphatic&aromatic- synthesis,properties,basic strength of amines,hins berg's separation of amines Diazonium salts- preparations and synthetic applications.
Examples/Illustrations	Ethyl amine,di ethyl amine Aniline,
Additional inputs	DYES-Fractional distilations
Teaching Aids used	Black Board
References Cited	A Text Book of unified chemistry
Student Activity Planned after the Teaching	Slip test
Activity Planned outside the Class room, if any	Assignment
Any other activity	To watch LMS Videos

Signature of the Lecturer

Commissioner of Collegiate Education A .P.
Proforma for Teaching Plan 2017-2018

Name of the Department :	CHEMISTRY
Name of the Lecturer	V.HIMA KUMARI
Course/Group:	II BSc BHC,BZC
Paper:	SEM- IV, Paper- IV
Name of the Topic	Hetero cyclic compounds
Hours required	7h
Learning objectives	To know the synthesis and structure
Previous knowledge to be reminded	Benzene
Topic Synopsis	Five membered rings- Classification,synthesis,structure, Aromaticity,resonance,electrophilic substitutions of furan,pyridine- synthesis,structure,nucleophilic reactions &basic character.
Examples/Illustrations	Piperidine,benzo furon
Additional inputs	Applications of Heterocylics in various compounds
Teaching Aids used	PPT &Black Board
References Cited	A Text Book of kalyani publications
Student Activity Planned after the Teaching	Important topics for exam
Activity Planned outside the Class room, if any	Assignment
Any other activity	Work allotted to search the Material for related topic

Signature of the Lecturer

Commissioner of Collegiate Education A .P.

Proforma for Teaching Plan 2017-2018

Name of the Department :		CHEMISTRY
Name of the Lecturer:		V.HIMA KUMARI
Course/Group:		II BSc BHC,BZC
Paper:		SEM- IV, Papers- IV
Name of the Topic	Carbohydrates	
Hours required	8h	
Learning objectives	To gain Knowledge about glucose and fructose .	
Previous knowledge to be reminded	Pyran-structure	
Topic Synopsis	Glucose-synthesis,properties,structure.fructose-synthesis,properties,structure,mutarotation,interconversions-glucose-fructose,fructose-glucose,arabinose-glucose,glucose-arabinose.	
Examples/Illustrations	Dextrose,galctose	
Additional inputs	Importance of carbohydrates	
Teaching Aids used	PPT &Black Board	
References Cited	A Text Book of unified chemistry	
Student Activity Planned after the Teaching	Slip test	
Activity Planned outside the Class room, if any	Seminars	
Any other activity	You tube videos related to carbohydrates	

Signature of the Lecturer

