

Lesson Plan

Name of Faculty : Mr. Sonu, Assistant Professor of Chemistry
 Discipline : Computer Science and Engineering
 Semester : 1st (Odd)
 Subject : Chemistry (BSC102)
 Lesson Plan Duration : 12 weeks (from Jan-April-2021)

Work Load (Lecture/Practical) per week (in hours): Lectures-03 hours

Week	Theory		Topic Covered Date and Remarks		
	Lecture-Day	Topic (Including Assignment/Test)	Date	HOD	Director- Principal
1 st	1	Effective nuclear charge, penetration and energy of orbitals.			
	2	Periodic properties			
	3	Polarizability and oxidation states			
	4	Coordination number and geometries			
2 nd	5	Hard and soft bases			
	6	Molecular geometries			
	7	Ionic, dipolar and Van Der Waals Interactions			
3 rd	8	Equation of state of real gases			
	9	Potential energy surfaces			
	10	Trajectories			
4 th	11	Introduction of organic reactions			
	12	Types of organic reactions			
	13	Cyclization and ring opening reactions			
5 th	14	Oxidation and reduction			
	15	Synthesis of drug molecules			
	16	Substitution reactions			
5 th	1st Minor Test				
6 th	25	Representation of 3D structures			
	26	Types of isomers			
	27	Chirality and optical activity			
	28	Structural and stereoisomers			
7 th	29	Configurational and conformational isomers			
	30	Isomerism in transition metal complexes			
	31	Principle of spectroscopy and selection rule			
	32	Electronic spectroscopy, fluorescence and its application.			
8 th	33	Vibrational and rotation spectroscopy			
	34	NMR and MRI			
	35	Surface characterization techniques			
	36	Diffraction and scattering			
9 th	37	Thermodynamic functions			
	38	Free energy and EMF			
	39	Cell potential and Nernst equation			
	40	Acid base, reduction-oxidation equilibria			
10 th	41	Water chemistry, corrosion.			
	42	Metallurgy through Ellingham Diagram			
	43	Schrodinger wave equation			
	44	PIB solutions and wave function for hydrogen atom			
11 th	2nd Minor Test				
12 th	49	Molecular orbital for diatomic molecules and plots			
	50	Energy level diagrams and aromaticity			
	51	CFT, magnetic properties and band structure			
	52	Query and Solution			