

Lesson Plan

Name of the Faculty : Ms. Nidhi

Discipline : Common to All

Semester : 2nd

Subject : CHEMISTRY (BSC-CHE-101-G)

Lesson Plan Duration : (from Jan., 2020 to April, 2020)

** Work Load (Lecture) per week (in hours): Lectures-02

Week	Theory	
	Lecture Day	Topic (including assignment/test)
2nd (04/01/20) To (11/01/20)	2nd	Schrodinger equation (Introduction and concept only).
	2 nd	Forms of the Hydrogen atom wave function
2 nd (12/01/20) To (19/01/20)	2nd	plots of these functions to explore their spatial variations (derivation excluded)
	2 nd	Molecular orbital energy level diagrams of diatomic molecules
3 rd (20/01/20) To (27/01/20)	2nd	Pi- molecular orbitals of butadiene and benzene
	2 nd	Crystal field theory and the energy level diagrams for transition metal ions
4 th (28/01/20) To (03/02/20)	2nd	Band structure of solids and the role of doping on band structures. Assignment-1
	2 nd	Effective nuclear charge, penetration of orbitals

5 th (04/02/20) To (11/02/20)	2 nd	variations of s, p, d and f orbital energies of atoms in the periodic table
	2 nd	Electronic configurations, atomic and ionic sizes
6 th (12/02/20) To (19/02/20)	2 nd	Ionization energies, electron affinity
	2 nd	Electronegativity, polarizability, oxidation states
7 th (20/02/20) To (27/02/20)	2 nd	Representations of 3 dimensional structures Assignment-2
	2 nd	structural isomers and stereoisomers, configurations
8 th (28/02/20) To (06/03/20)	2 nd	symmetry and chirality, enantiomers, diastereomers
	2 nd	optical activity, absolute configurations
9 th (07/03/20) To (14/03/20)	2 nd	Isomerism in transitional metal Compounds. Assignment-3
	2 nd	Introduction to reactions involving substitution, addition, elimination, oxidation, reduction
10 th (15/03/20) To (22/03/20)	2 nd	Cyclization (mechanism excluded). Synthesis of commonly used drug molecules (Aspirin & Paracetamol).
	2 nd	Ionic, dipolar and Van der Waals interactions
11 th (23/03/20) To (30/03/20)	2 nd	Equations of state of real gases and critical phenomena.
	2 nd	Hardness of water- Introduction, Types, Measurement of hardness by EDTA method

12 th (31/03/20) To (06/04/20)	2 nd	Methods of water softening (Lime soda process, Zeolite Process, Demineralization process) Assignment-4
	2 nd	Corrosion: Introduction, Types, Factor affecting corrosion and methods of prevention.
13 th (07/04/20) To (14/04/20)	2 nd	Basic concept of spectroscopy
	2 nd	Principle and Applications of different spectroscopic techniques (UV-Visible and IR spectroscopy).
14 th (15/04/20) To (22/04/20)	2 nd	Nuclear magnetic resonance
	2 nd	Magnetic resonance imaging
15 th (23/04/20) To (30/04/20)	2 nd	Elementary discussion on Flame photometry.
	2 nd	Assignment-5
16 th (01/05/20) To (04/04/20)	2 nd	REVISION OF SYLLABUS
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