Koyana Education Society's

Balasaheb Desai College,Patan

Department of Chemistry

Teaching Plan- 2023-24

Month - September- 2023 Semester – I & V

Name of the Teacher- Prof.Dr. P.D.Kamble

Dates	Unit	Sub unit	Teaching Method Aids
B.Sc.-I			
02/09/2023		3.Characteristics of group 13th, 14th and 15th elements with special reference to electronic configuration and periodic properties.	Lecture
06/09/2023		4. Compounds of group13th, 14th and 15th elements.	Lecture
07/09/2023		5. Boron –diborane (only structure).	Lecture
09/09/2023		6. Classification of solids as conductor, insulators and semiconductors on the basis of band theory.	Lecture
13/09/2023		7. Allotropes of carbon and phosphorus.	Lecture
14/09/2023		8. Oxyacids of Nitrogen (HNO2, HNO3).	Lecture
16/09/2023		9. Oxyacids of Nitrogen (HNO2, HNO3).	Lecture
20/09/2023	**Unit I: Atomic Structure and Periodicity of Elements (8 hours)**	1. Bohr's theory of hydrogen atom and its limitations	Lecture
21/09/2023		2. Wave particle duality	Lecture
23/09/2023		3. Heisenberg uncertainty principle	Lecture
27/09/2023		4. Quantum numbers and their significance	Lecture
30/09/2023		5. Shapes of s, p and d atomic orbitals	Lecture
B.Sc.-III			
04/09/2023		4.Factors affecting the Crystal field splitting.	Lecture-Chart
05/09/2023		5 High spin and low spin octahedral complexes w.r.t. Co (II)..	Lecture-Chart
06/09/2023		6. Crystal Field stabilization energy (CFSE), Calculation with respect to octahedral complexes only.	Lecture-Chart

11/09/2023		7. Limitations of CFT.	Lecture
12/09/2023		8. Molecular orbital theory (MOT). Introduction.	Lecture
13/09/2023		9. MOT of octahedral complexes with sigma bonding such as [Ti(H2O)6]3+,	Lecture
18/09/2023		10. [CoF6]3– , [Co(NH3)6]3+.	Lecture
20/09/2023		11. Merits and demerits of MOT.	Lecture
25/09/2023	**Unit 3. Metals, Semiconductors and Superconductors.**	1. Introduction. Properties of metallic solids.	Lecture
26/09/2023		2.Theories of bonding in metal. i.Free electron theory.	Lecture
27/09/2023		ii.Molecular orbital theory (Band theory).	Lecture

(Dr. S. D. Pawar)
Principal
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