Teaching Plan
Academic Year 2015-2016

Class **BSc. T Y** **Semester:** **VI sem**
Subject: **Chemistry** **Paper No:**

Periods per weeks: Th. __ Pract. ____ **Test (Date): _____**

Weeks (Total) : 15 **Tutorial (Date):_____**

WEEKS	TOPICS TO BE COVERED
1	Heterocyclic Compounds 13 Hrs. Introduction: Molecular orbital picture and aromatic characteristics of pyrrole, furan, thiophene and pyridine
2	Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution. Mechanism of nucleophilic substitution reactions in pyridine
3	Comparison of basicity of pyridine, piperidine and pyrrole. Condensed Heterocyles: Introduction, Preparation of Quinoline (Skraups Synthesis
4	Isoquinoline (Bischler - Napirlaski) and Indole (Fischer indole Synthesis).
5	2. Carbohydrates 10 Hrs. Defination, Introduction and Classification. Monsaccharides- Interconversion of Glucose and Fructose, chain lengthening, chain shortening of aldoses. Conversion of Glucose in to mannose
6	Determination of ring size of Monosaccharide, Mechanism of Mutarotation and Introduction to disaccharides (maltose, sucrose and lactose)
7	and Polysaccharides (Starch and cellulose) without involving structure determination. 3. Synthetic Polymers. 07 Hrs. Introduction, Classification based on nature of synthesis (without mechanism) with examples.
8	(Addition and condensation polymers). Properties, uses and synthesis of polyvinyl chloride, polyvinyl acetate, polystyrene, polyacrylonitrile
9	Nylon 6, Nylon 66. Introduction to synthetic and natural rubber, properties, uses and synthesis of Buna N., Neoprene and silicon rubber
10	4. Synthetic Dyes and Drugs 15 Hrs. Definition, colour and constitution (electronic concept) of dye, classification based on chemical constitution
11	synthesis of methyl orange, Congo red, malachite green, crystal violet, Alizarin and indigo dyes
12	Synthetic Drugs, Defination, introduction, classification of drugs. Properties of ideal drug

13	Synthesis of chloromycetien, paracetamol, phenacetien, sulphaguainidine
14	**Revision**
15	**Revision**

Dr. Sayyad Sultan

Teacher's Signature **H.O.D.'s Signature**

FM/CD/01
Rev : 00

Teaching Plan
Academic Year 2015-2016

Class **BSc. T Y** **Semester:** **VI sem**
Subject: **In organic Chemistry** **Paper No:**

Periods per weeks: Th. __ Pract. ____ **Test (Date): _____**

Weeks (Total) : 15 **Tutorial (Date):_____**

WEEKS	TOPICS TO BE COVERED
1	1. Metal-Ligand Bonding in Transition Metal Complexes 12 Hrs Limitations of Valence Bond Theory
2	An Elementary idea of Crystal Field Theory Crystal Field Splitting in Octahedral, Tetrahedral and Square Planar Complexes
3	Factors affecting Crystal Field Parameters 2. Electronic Spectra of Transition Metal Complexes 7 Hrs Types of Electronic Transitions
4	Selection rules for d -d transitions Spectro -chemical series
5	Orgel Energy level diagram for d1, d5 and d9 Electronic
6	Spectrum of [Ti (H2O)6]3+ complex ion. 3. Organometallic Compounds 10 Hrs Definition, Nomenclature and classification of Organometallic Compounds Preparation,
7	Properties, Bonding and Applications of alkyls and aryls of - Li, Al, Hg, Sn and Ti. A Brief account of metal - ethylenic Complexes
8	Nature of bonding in metal carbonyls.
9	4. Bioinorganic Chemistry 10 Hrs Essential and trace elements in biological processes Metalloporphyrins with special reference to hemoglobin and myoglobin
10	Biological role of alkali (Na+, K+) and alkaline earth metal ions(Mg2+, Ca2+). Nitrogen fixation
11	5. Chromatography 06 Hrs Definition and classification of chromatography Paper and Thin Layer Chromatography
12	Method of Development (Ascending, Descending Chromatography) Locating Technique

13	UV-light / Chemicals) R f value Comparison between paper and TLC Applications.
14	Revision
15	**Revision**

Dr. Mohd Asif

Teacher's Signature **H.O.D.'s Signature**