PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY, PANIPAT

DEPARTMENT OF PHARMACY

Course: B.Pharmacy

LESSONPLAN

Faculty Name: Dr. Neelam Malik **Class: B. Pharmacy –3rd semester**

Subject :Pharmaceutical Organic Chemistry –II **Subject Code: BP301T**

Scope of the Subject: This subject deals with general methods of preparation and reactions of some organic compounds. Reactivity of organic compounds is also studied here. The syllabus emphasizes on mechanisms and orientation of reactions. Chemistry of fats and oils are also included in the syllabus.

Course outcome: Upon completion of the course the student shall be able to

- Write the structure, name and the type of isomerism of the organic compound
- Write the reaction, name the reaction and orientation of reactions
- Account for reactivity/stability of compounds
- Prepare organic compounds

Number of Lectures: 45 + 5

Each lecture: 01 hour

Lecture No.	Particular	Remark/Date
Introduction		
1.	General discussion about basic concepts of organic chemistry	
Unit 1		
Module 1: Benzene and its derivatives		
2.	Physical and Chemical Properties of Benzene	
3.	Analytical, synthetic and other evidences in the derivation of structure of benzene, Orbital picture,	
4.	Resonance in benzene, aromatic characters	
5.	Huckle's rule	
6.	Reactions of benzene - nitration, sulphonation, halogenations reactivity	
7.	Reactions of benzene Friedelcrafts alkylation- reactivity, limitations, Friedelcrafts acylation.	
8.	Substituents, effect of substituents on reactivity of mono substituted benzene compounds towards electrophilic substitution reaction	
9.	orientation of mono substituted benzene compounds towards electrophilic substitution reaction	
10.	Structure and uses of DDT, Saccharin, BHC and Chloramine	
UNIT -ll		
Module 2: Phenols		
11.	Physical And Chemical Properties of Phenols	

12.	Acidity of phenols,	
13.	Effect of substituents on acidity of Phenols	
14.	Qualitative tests, Structure and uses of phenol, cresols, resorcinol, naphthols	
Module 3: Aromatic Amines		
15.	Basicity of amines	
16.	effect of substituent's on basicity	
17.	synthetic uses of aryl diazonium salts	
18.	Acidic Character of Aromatic Acid	
19.	Effect of substituent's on acidity of Aromatic Acids	
20.	Important reactions of benzoic acid.	
UNIT-lll		
Module 4: Fats and Oils		
21.	General Properties of	
22.	Fatty acids reactions	
23.	Hydrolysis, Hydrogenation,	
24.	Saponification and Rancidity of oils, Drying oils	
25.	Analytical constants – Acid value,	
26.	Saponification value	
27.	Ester value	
Module 5: Fats and Oils		
28.	Iodine value of Triglycerides	
29.	Acetyl value of fats and oils	
30.	Reichert Meissl (RM) value – significance and principle involved in their determination.	
UNIT IV		
Module 6: Polynuclear hydrocarbons		
31.	Introduction to polynuclear Hydrocarbons	
32.	Physical and Chemical Properties of Polynuclear Hydrocarbon	
33.	Synthesis, reactions, Structure and medicinal uses of Naphthalene	
34.	General Reaction, Synthesis, Structure and medicinal uses of Phenanthrene	
35.	General Reaction, Synthesis, Structure and medicinal uses of Anthracene	
36.	Reaction, Synthesis, Structure and medicinal uses of Diphenylmethane	
37.	Structure and medicinal uses of Triphenylmethane and their derivatives	
38.	Synthesis and reaction of uses of Triphenylmethane and their derivatives	
UNIT V		
Module 7: Cyclo alkanes		
39.	General Properties of Cycloalkanes	
40.	Baeyer's strain theory	

41.	limitation of Baeyer's strain theory	
42.	Coulson and Moffitt's modification	
43.	Sachse Mohr's theory (Theory of strainless rings),	
44.	Reactions of cyclopropane	
45.	Reactions of cyclobutane	
Revision		
46.	Revision of Unit 1 with previous question paper	
47.	Revision of Unit 1l with previous question papers	
48.	Revision of Unit lll with previous question papers	
49.	Revision ofUnit 1V with previous question papers	
50.	Revision of Unit V with previous question papers	

Teacher in-charge **HOD** **Principal**