

B.Pharm I Year II Semester (R15) Supplementary Examinations December 2017

PHARMACEUTICAL ORGANIC CHEMISTRY – II

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define hydrogen bonding. Give example for intermolecular and intra-molecular hydrogen bonding.
 - (b) Write the structural formula for:
 - (i) Dimethyl ether. (ii) 2-Methoxypentane. (iii) Diisopropyl ether. (iv) 2-Methyl 1-2 propanol.
 - (c) Write the structure and IUPAC name of Cumen (isopropylbenzene) and p-xylene.
 - (d) What happens when benzyl chloride is treated with aqueous NaOH?
 - (e) Write the canonical structure of naphthalene.
 - (f) Write the structure along with their numbering system for: (i) Anthracene. (ii) Phenanthrene.
 - (g) Write any one method of preparation of formic acid and acetic acid.
 - (h) Write the reaction involved in the preparation of malonic ester.
 - (i) Explain why dimethylamine is more basic than methylamine.
 - (j) Describe any two important reactions of nitrobenzene.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 (a) Give general method of preparation of phenols.
(b) Explain the acidity of phenols and discuss the stability of phenoxide ion.

OR

- 3 Write the nomenclature, classification and method of preparation of alcohols with examples.

UNIT – II

- 4 (a) Describe the important reactions of benzene.
(b) What is Huckel's rule? Write the structure of any two compounds that follow this rule.

OR

- 5 Describe in detail theory of reactivity and orientation in monosubstituted benzenes.

UNIT – III

- 6 In detail discuss electron density and reactivity of polynuclear aromatic hydrocarbons.

OR

- 7 Explain aromatic character of anthracene and phenanthrene. Write their resonance structures and explain the electrophilic substitution reaction in aromatic hydrocarbons.

UNIT – IV

- 8 Explain the intermolecular association and stability of carboxylate anion. Discuss the acidity of carboxylic acids with suitable examples.

OR

- 9 Describe the hydrolysis and reduction reactions involved in esters and amides. Explain Hoffmann's degradation of amides.

UNIT – V

- 10 Describe the reduction reactions involved in aromatic nitro compounds and discuss the acidity of nitro compounds containing α hydrogens.

OR

- 11 Explain the separation of mixture of amines by Hinsberg method and discuss the acylation of amines.