

B Pharmacy First Year 2nd Semester Examination 2017

Pharmaceutical Chemistry - I (Organic-1)

Answer Five questions taking at least two from each group

GROUP - A

Time - 3 Hours

Full marks- 100

Q1. a) Deduce the structure of benzene.

- 10

b) Show reaction mechanism for aromatic electrophilic substitution reactions. i) Nitration

ii) Friedel craft's Reaction

5 x 2 = 10

Q2. i) Explain rules of orientation in benzene.

ii) Mention three groups each of ortho/para and meta orienting

iii) Give the structure of p-iodo-o-cresol & 3-bromo-4-hydroxybenzoic acid.

iv) What will be the product when benzene is treated with chlorine in presence of iron and in presence of sunlight only.

v) When o-chloronitrobenzene is treated with alkali what will be the product.

vi) How do you prepare trifluoromethylbenzene from toluene

vii) What will be the product when p-hydroxytoluene is treated with bromine

ix) Mention the product of nitrobenzene in presence of triphenylphosphine.

x) Show the rearrangement of phenylhydroxylamine to p-aminophenol.

2 x 10 = 20

Q3. a) i) How do you prove that during nitration alpha complex formation takes place before final product of nitrobenzene.

ii) How do you prepare o-dinitrobenzene

iii) Show preparation of benzylideneaniline from aniline.

iv) Write reaction of aniline with carbon disulphide and alkali.

v) Among ortho and meta nitroaniline which one gives nitrophenol with alkali.

2 x 5 = 10

b) Show the reaction steps for the synthesis of following compounds.

2 x 5 = 10

N-methylformanilide, Michler's ketone, Diphenylamine, Benzimidazole, Quinoxaline

B. Pharm. 1st Year 2nd Semester 2017

PHARM. CHEM. I (Organic-I)

Time: 3 h

Full Marks: 100

Group 'B'

Answer at least *one* question from this group.

4. a) Write a note on nomenclature of dihydric alcohols.

b) How do you prepare glycerol? Discuss synthetic steps of preparations using chemical equations.

c) Write structures and names of oxidative products of ethylene glycol. $6 + 8 + 6 = 20$

5. a) Discuss the general methods of preparation of ketones mentioning the difference between these from the general methods of preparation of aldehydes.

b) Write structures and names of oxidative products of glycerol. $12 + 8 = 20$