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Paper Id: 1 5 0 2 0 1 Roll No.

B PHARM

(SEM II) THEORY EXAMINATION 2017-18

PHARMACEUTICAL CHEMISTRY-II

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

a. Why sigma bond is stronger than pi bond.
b. Define D & L configuration.
c. Discuss any two methods of preparation of alkene.
d. Give the test of identification for aldehyde and ketone.
e. Differentiate electrophile and nucleophile.
f. Define Lucas test of alcohols.
g. Explain how phenols are acidic in nature.
h. Give the reaction of benzoin condensation.
i. Define Diazotization reaction.
j. Write the structure of naphthalene and anthracene.

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

a. Give the detailed classification of organic compounds.
b. Explain electrophilic and free radical addition mechanism alkenes.
c. Discuss the electrophilic substitution reaction of benzene.
d. Describe the following reactions with their mechanism and synthetic applications.
   (i) MPV reduction
   (ii) Oppenauer oxidation
e. Write a note on Aryl diazonium salts.

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Discuss various types of geometrical isomers with suitable examples.

(b) Explain resonance and inductive effect in detail along with their applications.

4. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Give the mcthod of preparation of alkyl halides, discuss about SN^1 and SN^2 reactions.

(b) Define methods of preparation of alcohols. Explain chemical identification of primary, secondary and tertiary alcohols in detail.

5. Attempt any *one* part of the following: **10 x 1 = 10**

(a) Define aromaticity, orientation and reactivity of aromatic compound.

(b) Explain nucleophilic reactions for benzene with mechanism.

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6. **Attempt any *one* part of the following:** **10 x 1 = 10**

(a) Explain Mannich and Beckmann rearrangement reactions with mechanism and synthetic applications.

(b) Describe Aldol and benzoin condensation reaction with mechanism and synthetic applications.

7. **Attempt any *one* part of the following:** **10 x 1 = 10**

(a) Discuss methods of preparation and reactivity of Grignard reagent. Explain any four synthetic applications of Grignard reagent.

(b) Give the reactions of α-β unsaturated carbonyl compounds.

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