JN-1612030701020300 Seat No. _____

Master of Pharmacy Management (Sem. II) (CBCS) Examination

August / September - 2019

Pharmaceutical Chemistry - II

(Organic Chemistry - I)

Time : **3** Hours]   [Total Marks : **80**

Instructions : (1) Attempt three questions from each section.

(2) Questions 1 and 5 are compulsory.

(3) Figure to the right indicates full marks for the respective question.

SECTION - I

1   Answer the following questions : (Any **Seven**)   **14**

(1) Define molecular weight and molecular formula.

(2) Give the name of methods for quantitative estimation of nitrogen atom.

(3) What is the difference between Intermolecular & Intramolecular forces ?

(4) Define and classify chemical bond.

(5) Define Resonance and Hyperconjugation.

(6) What is the relative stability of 1°, 2° and 3°carbocation ?

(7) Phenol is weak acid. Why ?

(8) What is polynuclear aromatic compound ? Classify it.

(9) What is diene ? Why conjugated diene is more stable than isolated diene?

(10) Define hydrocarbons. Classify it.

2   (1) What is aromatic compound ? Explain preparation and reactions of Benzene.   **7**

(2) Define hybridization. Explain SP^2 and SP^3 hybridization of carbon with examples.   **6**

3 (1) Write any two methods for preparation and reactions **7** of alcohol and ether.

(2) Explain synthesis and reactions for Phenol. **6**

4 (1) Explain Sn2 and Sn1 reaction of alkyl halide with **7** suitable example.

(2) Write a note on polynuclear aromatic compounds **6**

SECTION - II

5 Answer the following questions : (Any **Two**) **14**

(1) Define reactive intermediates ? Classify and Discuss stability and reactions of carbocation and carbanion.

(2) Give method of preparation and reactions of Alkene.

(3) Write principle and reactions involved in Kjeldahl's method for estimation of nitrogen.

6 (1) What is alcohol ? Classify alcohol and explain **7** laboratory method for preparation of alcohol.

(2) Explain the methods for quantitative estimation of **6** carbon and Halogen.

7 (1) Write Haworth synthesis of naphthalene and **7** anthracene.

(2) How will you distinguished 1°, 2° and 3° amines ? **6** (explain with chemical reactions)

8 Answer the following :

(1) Organic monobasic acid on combustion gave **7** following results.

(i) 0.1 gm gave 0.2524 gm CO_2 and 0.0443 gm water.

(ii) 0.122 gm of acid required for neutralization of 10 ml of 0.1 N alkali. Determine molecular formula of acid.

(2) Write a note on Molecular orbital theory. **6**

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