JBL-1612020701030200 Seat No. _____

M. P. M. (Sem. III) (CBCS) Examination

December – 2019

Pharmaceutical Chemistry - 03

(Org. Chem. - 02)

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

Instructions :

1. Answer any three questions from each section except question 1 and 5 are compulsory.
2. Figures to the right indicate marks.
3. Draw neat and clean diagrams as required.

SECTION - I

1 Answer any seven out of given **ten** questions : **2×7=14**

a) Write Hell Wolhard Zelinsky reaction.

b) Explain Mesomer with example.

c) Why Acetone is less reactive than Acetaldehyde?

d) Why acetic acid is stronger than propanoic acid ? Explain.

e) What do you understand regarding the Nanochemistry ?

f) What is the difference between Configurational and Confonnational isomers ?

g) Write structures of imidazole, pyrimidine, isoxazole and thiazole.

h) Explain Tollens' test.

i) What is Chirality? Give one example.

j) Define Enantiomers and Diastereomers with example.

2 Answer the following :

a) Write a note on stereoselective and stereospecific reaction with example. **7**

b) Write a note on axial chirality. **6**

3 Answer the following :

a) Discuss the stability and potential energy changes of all conformation for n-Butane. **7**

b) Write a note on Fischer - Indole synthesis with mechanism. **6**

4 Answer the following :

a) Explain Absolute configuration and R & S System with suitable example. **7**

b) Explain resolution of Racemic mixture in detail. **6**

SECTION - II

5 Answer any **two** out of given **three** questions : **2×7=14**

a) Explain oxidation and reduction reactions of Aldehydes and Ketones in detail.

b) What is conjugated system? Explain the Michael addition reaction.

c) Which are the functional derivatives of carboxylic acid? Give two methods for preparation of each.

6 Answer the following.

a) Explain Benzoin condensation and Cannizaro reaction with example. **7**

b) Write a note on Aldol condensation reaction with mechanism. **6**

7 Answer the following :

a) Explain preparation and reactions of Pyrrol in detail. **7**

b) What is Benzyne? Explain Nucleophilic aromatic substitution reaction. **6**

8 Answer the following :

a) Explain twelve principles of Green chemistry in detail. **7**

b) Write synthesis and reactions of Quinoline. **6**

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