JBO-M201913

Seat No. _____

First Year D. Pharm. Examination

January – 2020

Pharmaceutical Organic Chemistry

Time : **3** Hours] [Total Marks : **70**

Instructions :

1. Figure to the right indicates full marks.
2. Draw neat and clean diagram as required.

1 Answer the following questions : **10 × 2 = 20**

a) Comment : Para chloro-aniline is less basic than aniline.

b) Give any two oxidation reaction.

c) Draw different confirmation of cycloalkane.

d) What is the meaning of Hyperconjugation and resonance ?

e) Justify : Primary carbocation is more stable than Secondary carbocation.

f) State the Markownikov's and anti-markownikov's rule with suitable example.

g) Explain lewis acid base theory concept in brief.

h) Justify: Phenols are weak acidic in naure.

i) Define protic and aprotic solvent with examples.

j) Enlist the different types of intermolecular forces present in organic compounds.

2 Answer any two out of the following **2 × 10 = 20**

a) Discuss in detail on Williamson synthesis, Kolbe reaction and Sandmeyer's reaction.

b) Write a detailed note on kinetics, mechanism, stereochemistry and factor affecting SN_1, and SN_2 reaction.

c) Give any one preparation and use of the following :

a) Urea b) Dimercaprol

c) Glyceryl trinitrate d) benzyl benzoate

e) Saccharin sodium.

3 Answer any six out of the following **6 × 5 = 30**

a) Write a note on different types of addition reaction at C = C.

b) Write an informative note on cannizzaro reaction and Reimer tieman's reactions.

c) What do you mean by isomer? Classify structural isomer with examples.

d) Explain reaction and detail mechanism of alkylation of benzene. What are the limitations of Friedel-Crafts alkylation?

e) Explain benzyne mechanism for nucleophilic aromatic substitution in detail.

f) Discuss about Bayer strain theory with its limitations.

g) Write an informative note on Fries rearrangement and Michael addition.

h) Draw the structure of the following:

   a) 2-methylbutanenitrile

   b) N-methylhexan-3-amine

   c) 4-Oxopent-2-enal

   d) cyclohexa-1,4-diene

   e) Ethandioic acid