Total No. of Questions : 5] *[Total No. of Printed Pages :2*

Roll No .....

PY-203

B.Pharm. II Semester

Examination, December 2016

Pharmaceutical Chemistry-III

(Organic-I)

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What are Electrophiles?
   b) What is hybridization?
   c) What is racemic modification? How the resolution of racemic mixture is done?
   d) What is stereochemistry? What is stereoisomerism? Give classification and nomenclature of different types of isomers. Add a note on chirality.

   OR

   Describe the SP^2 hybridization.

2. a) Write the physical properties of alkynes.
   b) What is Huckel rule?
   c) Describe the structure of ethane.
   d) Describe the SNAr mechanism of nucleophilic substitution. Discuss the reactivity and orientation in nucleophilic aromatic substitution.

OR

Discuss the mechanism of Electrophilic aromatic substitution. Describe the reactivity and orientation in Electrophilic aromatic substitution.

3. a) What are heterolytic reactions?
   b) Write the reaction for preparation of Grignard reagent.
   c) Describe the Conformations of Cycloalkanes.
   d) Describe the SN2 substitution reaction.

   OR

   Describe the E1 Elimination reaction.

4. a) Write the Williamson synthesis.
   b) What is anti-markovnikov addition?
   c) Compare the boiling point and water solubility of ortho-nitro phenol, meta-nitro phenol and para-nitro phenol. How can these differences be accounted for?
   d) Describe the reactions of Alcohols.

   OR

   Discuss the preparation and reactions of Ethers.

5. a) Which acid among the chloro-acetic acid and acetic acid the is a stronger acid and state the reason for the stronger acidity?
   b) What is Hinsberg test?
   c) Discuss the effect of substituents on basicity of amines.
   d) Give an account on nucleophilic acyl substitution.

   OR

   Give an account on diazonium salts.

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