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

Roll No .....

PY-303

B.Pharmacy III Semester

Examination, December 2016

Pharmaceutical Chemistry - IV

(Organic Chemistry - II)

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) Give any one example of tautomerism in heterocycles.
   b) Which one is more basic Pyrrole or Pyridine and why?
   c) Give any three preparations of oxazole.
   d) Give the reaction and mechanism for electrocyclic and Cycloaddition reaction.

   OR

   Give the synthesis, chemical reactivity and medicinal applications of Imidazole.

2. a) Give any one example of neighboring group effect.
   b) Discuss any two method of preparation of nitrobenzene.
   c) Give any three chemical reactions for Nitrobenzene.
   d) Discuss the theory of energy transfer characteristics of Photoreactions.

   OR

   Explain the Chemical Properties of pyridine.

3. a) Give any two method of preparations for thiophene.
   b) Discuss the molecular orbital structure of Pyrimidine.
   c) Give any three chemical reactions of Pyrazole.
   d) Discuss the strain bond angle, torsional strain and its consequences in heterocyclics.

   OR

   Give the synthesis and chemical reactivity of aziridines.

4. a) Give the suitable example of Bridged heterocycles.
   b) Give any two reactions of Isocyanides.
   c) Explain the Hantzsch-Widman system of nomenclature for heterocyclics.
   d) Discuss the preparations and chemical reactions of Cyanides.

   OR

   Discuss the structures and reactivity of any two sulphur containing compounds.

5. a) Give the medicinal application of benzotriazole.
   b) Give any one example of catalysis by transition metal complexes.
   c) Discuss the chemical reactions of acridines.
   d) Discuss the preparation and chemical properties of Quinolines.

   OR

   Give the synthesis and chemical properties of Coumarin.

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