PY - 303

B.Pharmacy III Semester

Examination, December 2014

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) What are the differences between Photochemistry and Pericyclic reactions?

b) What do you mean by cycloaddition reaction?

c) Discuss the with example electrocyclic reactions.

d) Discuss the Orbital symmetry rules with example.

Discuss briefly Woodward-Hoffmann rule with suitable example.

2. a) Why is pyridine more basic then pyrrole?

b) Discuss the nucleophilic substitution reactions of pyridine.

c) Explain why fin-an is more reactive at position 2 than at position 3.

d) Describe important properties aziridines and acridine.

OR

Discuss briefly molecular orbital structure of pyrrole.

3. a) Give pharmaceutical applications imidazole.

b) What are heterocyclic compounds?

c) Discuss the synthesis Triazole and Benzimidazole.

d) Describe preparation, properties and applications Pyrimidine and Oxazole.

OR

Discuss the synthesis of i) Azetidine ii) Isoquinoline iii) Coumarin.

4. a) Define the term of aromatic nitro compounds.

b) What is nitration? What is the function of sulphuric acid in this reaction?

c) What products are obtained by the reduction of nitrobenzene?

d) Discuss the important properties of cyanides compounds.

OR

Discuss briefly properties and chemical reactions of alkyl isocyanides compounds.

5. a) How are phenols prepared from arylsulphonic acid?

b) What is use of sulphonic acid?

c) What are sulpha drugs? How are they prepared from aniline?

d) Discuss the preparation and chemical reaction of benzenesulphonic acid.

OR

Discuss the briefly prepartion and chemical properties of sulphanilic acid