[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
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16370(D) - 0 DEC 2016

B. Pharmacy 3rd Semester Examination

Pharmaceutical Chemistry-III
(Heterocyclic and Organic Chemistry) (CBS)

BP-301

Time : 3 Hours **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions selecting one question from each section A, B, C and D of the question paper and subparts of the questions in section E or question no. 9 is compulsory.

SECTION - A

1. (a) Write a note on : Optical Isomerism of lactic acid. (6)
   (b) Explain the reactions involving stereoisomers. (6)
2. Explain the mechanisms of elimination reactions. (12)

SECTION - B

3. (a) Write a short note on Diels-Alder reaction. (6)
   (b) What is Sigmatropic reactions explain? (6)
4. (a) Explain Michael addition reaction. (6)
   (b) Explain the chemistry of ethyl acetate. (6)

SECTION - C

5. (a) Discuss the molecular orbital structure of pyridine. (6)
   (b) Why pyridine is more basic than pyrrole? (6)
6. What are carbohydrates? How they are classified? Give the important reactions. (12)

SECTION - D

7. (a) What are proteins? Classify them. (6)
   (b) Explain the nucleotides synthesis. (6)
8. Describe the physical properties and chemical reactions of lipids. (12)

SECTION - E

9. Attempt all questions which are compulsory and all questions carry equal marks. (1×12=12)
   (a) Meso-tartaric acid is always optically_____.
   (b) The protein containing nucleic acid as prosthetic group is known as _____.
   (c) Plane-polarized light is affected by_____molecule.
   (d) The protein containing carbohydrate (>4%) as prosthetic group is known as_____.
   (e) A reducing sugar will react with _____ test.
   (f) Crossed aldol condensation between aromatic aldehyde and aliphatic ketone (or mixed ketone) is known as_____.
   (g) The monosaccharide obtained by hydrolysis of starch is_____.
   (h) How many isomeric aromatic hydrocarbons are possible for C_4H_8?
   (i) If a molecule cannot be superimposed on its mirror image, then it is said to be_____.
   (j) Starch is a mixture of_____+ amylopectin.
   (k) Reactions in which molecules are added together to form rings are called_____.
   (l) Optical isomers that are not mirror images are called_____.