

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

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

SECTION - B

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

SECTION - C

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

SECTION - D

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

SECTION - E

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