PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(Sixth Semester)

Branch-**CHEMISTRY**

ORGANIC CHEMISTRY - II

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10x2 = 20)

1 Explain why pyridine is more basic than pyrole.
2 Write the reaction of 2,4-pentanediol and 2,3-pentanediol with HIO_4.
3 What are peptides?
4 Why are amino acids called amphoteric compounds?
5 Illustrate Oppenauer oxidation.
6 What happens when benzaldehyde is heated with hydrazine and KOH?
7 State Hoffman rule.
8 Compare SNI with El reaction.
9 What is meant by the term conformer?
10 Cyclopropane is more reactive than cyclohexane. Give the reason.

SECTION - B *(25* Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5x5 = 25)

11 a Compare the relative reactivities of 5-memberes heterocyclic compounds.
OR
b Describe the role of NBS in organic reactions.

12 a Give the preparation and properties of glycine.
OR
b Write the main importance of RNA and DNA.

13 a Describe Benzidine rearrangement.
OR
What happens when acetamide is heated with bromine in presence of KOH? Give its pathway.

14 a n-Butyl chloride and tert-butyl chloride behave differently when treated with aqueous NaOH. Discuss reaction path in each case.
OR
b Explain the mechanism of dehydrohalogenation of alkyl halides.

15 a Describe the preparation methods of cyclopentane.
OR
Explain the sequence of changes in going from chair form to boat from of cyclohexane.

SECTION - C 130 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 a) Describe the preparation and properties of quinoline. (5)
b) Give the synthetic applications of OSO4. (5)

17 a) Discuss the primary structure of proteins. (6)
b) Sketch the synthesis of glycylalanine. (4)

18 Name thermal rearrangements. Explain them with suitable mechanism,

19 a) What is benzyne? Discuss its mechanism. (6)
b) 2,4,6-Trinitrochlorobenzene is easily hydrolysed with water but chlorobenzene is not so. Explain. (4)

20 a) Explain the stability of cycloalkenes in terms of Baeyer strain theory. (6)