Exam Date & Time: 28-Sep-2020 (10:00 AM - 01:45 PM)

PSG COLLEGE OF ARTS AND SCIENCE

Note: Writing 3hrs: Checking & Inserting Image : 30mins

BSc DEGREE EXAMINATION MAY 2020
(Sixth Semester)

Branch - CHEMISTRY

ORGANIC CHEMISTRY-II [14CHU22]

Marks: 75 **Duration: 210 mins.**

SECTION - A

Answer all the questions.

1) Outline the preparation of pyridine from pyrole. (2)

2) Write the reaction of propanol and butanoic acid with lead tetraacetate. (2)

3) What is meant by Essential amino acids? (2)

4) Explain the term: Zwitter ion. (2)

5) Illustrate MPV reduction. (2)

6) How can an alkane be obtained from carbonyl compound? (2)

7) State Saytzeff's rule. (2)

8) Compare S_N1 with E^1 reaction. (2)

9) Chair form of cyclohexane is more stable than boat form Justify: (2)

10) Cyclopropane is more reactive than cyclohexane. Give the reason. (2)

SECTION - B

Answer all the questions.

11) a) Compare the chemical properties of indole with quinoline. (5)

[OR]

b) Describe the oxidation reactions of periodic acid. (5)

12) Briefly write about secondary structure of protein. (5)

a)
[OR] Write a brief note on RNA and DNA. (5)
b)

13) Describe Beckmann rearrangement. (5)

a)
[OR] What happens when benzamide is heated with bromine in presence of KOH? Give its
b) pathway. (5)

14) What are the factors that affect S_N1 and S_N2 reactions? (5)

a)
[OR] Explain the mechanism of dehydrohalogenation of alkyl halides. (5)
b)

15) Describe the preparation methods of cyclopentane. (5)

a)
[OR] Explain the conformations of substituted cyclohexane. (5)
b)

SECTION - C

Answer 3 out of 5 questions.

16) Describe the preparation and properties of pyridine. (5)

a)
b) Discuss the action of SeO_2 in dehydrogenation and oxidation of organic compounds. (5)

17) How will you synthesize peptides from amino acids? (5)

a)
b) Outline the Gabriel phthalimide and Erlenmeyer azlactone synthesis of α-aminoacids. (5)

18) Complete the following reactions and suggest a possible mechanism:
a) 3,4-Dimethyl hexa-1, 5-diene $\xrightarrow{\Delta}$ (10)
b) 2-methylpropan-1, 2-diol + H_2SO_4 →

19) Describe the benzyne mechanism for nucleophilic aromatic substitution. Give evidence in support of the mechanism. (5)

a)

b) 2, 4, 6-Trinitrochlorobenzene is easily hydrolyzed with water but chlorobenzene is not so. Explain. (5)

20) Discuss Baeyer strain theory. (5)

a)

b) Describe the conformation analysis of n-butane. (5)

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