14BCV01 / 14BCU01

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017 ' |)'
(First Semester)

Branch - **BIOCHEMISTRY**

GENERAL CHEMISTRY

Time : Three Hours Maximum : 75 Marks

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

1 Define hybridization.
2 Write about intramolecular hydrogen bonding with an example.
3 Define normality.
4 What is enthalpy?
5 State Hess's law.
6 Define equilibrium constant.
7 What is homolytic fission?
8 Write about the importance of chromium in biomolecules.
9 What are diasterisomers?
10 What are epimers? Give examples.

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

11 a Explain Dalton's atomic theory.
OR
b Discuss the resonance s benzene. ^

12 a Derive an expression for entropy changes of ideal gases in different processes.
OR
b Explain the relationship between enthalpy and internal energy.

13 a Distinguish between order and moleualarity of reactions.
OR
b Write a short note on collision theory of bimolecular reactions.

14 a Write an explanatory note on types of elimination reactions.
OR
b Describe the mechanism of nucleophilic - reactions.

15 a List out the differences between enantiomers and disasteroisomers.
OR
b Write a brief note on shape of molecules with an example.

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

16 Discuss in detail the wave mechanical treatment of covalent bond theory.
17 Describe the thermodynamics laws in detail.
18 Explain the various methods of determining order of reactions.
19 Give an example through equation for (a) Electrophilic addition (b) SN reaction.
20 Explain the different types of structural - isomerism with examples.