

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017 * OJOX j 1-4.SCU02.
(First Semester)

Branch- **BIOCHEMISTRY**

STRUCTURAL BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Write any two properties of water.
- 2 > Define glucosamine.
- 3 What are peptide bonds?
- 4 What is meant by zwitter ion?
- 5 Define glycopospholipids.
- 6 What is meant by derived lipids?
- 7 Define phosphodiester linkage.
- 8 Write a short note on the unusual bases present in tRNA.
- 9 How is vitamin K important in biological system?
- 10 List out the diseases caused due to deficiency of calcium.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Give a detailed account on glycoproteins.
OR
b Write any two reactions of glucose due to alcoholic hydroxyl groups.
- 12 a How would you identify the N-terminal ends of peptides?
OR
b Explain the structure and functions of Haemoglobin.
- 13 a Write short notes on glycosphingolipids.
OR
b Explain the biological significance of lipids.
- 14 a Give an account on the mechanism of denaturation of DNA.
OR
b Write short note on mRNA.
- 15 a Give an account on the sources and functions of potassium and iron.
OR
b List out the fat soluble and water soluble vitamins.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Give a detailed account on (i) starch (ii) milk sugar.
- 17 Write notes on the following : (i) Structure of neutral aminoacids
(ii) Denaturation of proteins.
- 18 Explain in detail about the chemical properties of fatty acids.
- 19 Illustrate the structure of DNA as proposed by Watson and Crick.
- 20 Write the physiological functions and deficiency of magnesium and zinc.