

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2017
(Second Semester)

Branch- BIOTECHNOLOGY

BIOCHEMISTRY

Time : Three Hours

Maximum; 75 Marks

SECTION-A (20 Marks)

. Answer **ALL** questions

ALL questions carry **EQUAL** marks (10x2 = 20)

- 1 Define pH.
- 2 Name the major biomolecules.
- 3 Write the Harworth structure of lactose.
- 4 What are dextrans?
- 5 What are zwitter ions?
- 6 What is protein denaturation?
- 7 List out the types of RNA.
- 8 Define hormones.
- 9 Give the structure of cholesterol.
- 10 Mention the sources of vitamin A.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Explain the types of hydrogen bonding. ,
OR
b Write a note the biological role of buffer.
- 12 a Explain the properties and functions of glycoproteins.
OR
b How the maltose reacts with phenyl hydrazine?
- 13 a How amino acids separated by chromatography? Explain
OR
b Illustrate the biologically active amino acids with suitable examples.
- 14 a Describe the structure and functions of phospholipids.
OR
b Exemplify the double helical structure of DNA.
- 15 a Explain the structure, function and deficiency of vitamin D.
OR
b Give a note on urea cycle.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Discuss the laws of thermodynamics.
- 17 Explain the classification of carbohydrates with suitable example.
- 18 Give an account on the quaternary structure of protein with respect to Hemoglobin.
- 19 Describe the classification of lipids in detail.
- 20 Illustrate the TCA cycle with its energetics.