

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

Branch - **BIOTECHNOLOGY**

**BIOCHEMISTRY**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer **ALL** questions

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

- 1 What is buffer? Give one example.
- 2 Name the chemical elements in biomolecules.
- 3 What are homopolysaccharides. Give one example.
- 4 What is glycoprotein. Give one example.
- 5 Give the importance of GABA.
- 6 Give the importance of Histamine.
- 7 What is A-DNA?
- 8 Name the phospholipids.
- 9 Give the sources of riboflavin.
- 10 Name the disorders due to estrogen imbalance.

**SECTION - B (25 Marks)**

Answer **ALL** Questions

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

- 11 a Write a brief account on the cellular reactions of water.  
OR  
b Write a note on biological macromolecules.
- 12 a Give the chemistry and properties of starch.  
OR  
b Give the chemistry and properties of hyaluronic acid.
- 13 a What is denaturation? How protein gets denatured?  
OR  
b Explain the quaternary structure of proteins with an example.
- 14 a Explain : DNA Denaturation.  
OR  
b Give the function of cholesterol.
- 15 a What is P-oxidation? Give its pathway  
OR  
b Give the biological importance of vit B.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

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

- 16 What is buffer? Give its importance. Explain any one buffer system.
- 17 Give the structure and properties of any two disaccharides.
- 18 Write the classification and structure of amino acids.
- 19 Explain the types and functions of RNA..
- 20 Explain TCA Cycle with a neat diagram