

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

Branch - **MICROBIOLOGY**

**BIOCHEMISTRY**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer **ALL** questions

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

- 1 Define pH.
- 2 What is Osmosis?
- 3 Write a short note on non-reducing sugar.
- 4 Define mutarotation.
- 5 Give a short note on Rancidity of oil.
- 6 Define active transport.
- 7 Define zwitter ion.
- 8 Define peptides.
- 9 Define active site of an enzyme.
- 10 What is an allosteric enzyme?

**SECTION - B (25 Marks)**

Answer **ALL** Questions

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

- 11 a Write a note about biological macromolecules and its classification.  
OR  
b Explain about importance of buffer System of biological fluid.
- 12 a Differentiate between reducing and non reducing sugars with example.  
OR  
b Explain structure and properties of sucrose.
- 13 a How lipids are classified? Explain.  
OR  
b Discuss about sources and biological functions of any two water soluble vitamins.
- 14 a Illustrate the composition and biological functions of proteins.  
OR  
b Discuss about steroid and peptide hormones.
- 15 a Write a note on classifications of enzymes.  
OR  
b What is marker enzymes? Give the marker enzyme for heart and liver diseases.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

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

- 16 Discuss the role of water as the biological solvent.
- 17 Explain in detail about classification polysaccharides with examples.
- 18 Give a detailed note on structure, classification and functions of fatty acids.
- 19 Discuss about structural organization of proteins.
- 20 Derive Michaelis and Menton equation.