

S.No. 327

17PBT02

(For the candidates admitted from 2017–2018 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

First Semester

Biotechnology

BIOLOGICAL CHEMISTRY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL the questions.

1. (a) What is a Buffer? Explain the types and applications of buffer.

Or

- (b) Explain the types of biotransducer and their applications.

2. (a) Explain the types of Polysaccharides with examples.

Or

- (b) Explain the process of glycolysis with energy budget.

3. (a) Explain the chemical nature and properties of amino acids.

Or

- (b) Explain the Beta-pleated sheet of protein.

4. (a) Explain classification of lipid with example.

Or

- (b) Explain the types of RNA and their roles.

5. (a) Describe ping pong mechanism of enzyme-substrate complex.

Or

- (b) What are Iso enzymes? Explain the types of Iso enzymes.

SECTION B — (5 × 10 = 50 marks)

Answer ALL the questions.

6. (a) What is a Covalent Bond? Explain the types of covalent bonds.

Or

- (b) Describe the Second Law of Thermodynamics and state its merits and demerits.

7. (a) Explain the TCA Cycle with energy budget.

Or

- (b) Explain the process of Glycogenolysis and its advantages.

8. (a) Discuss in detail the Biosynthesis of amino acids.

Or

- (b) Explain in detail the classification of Amino acids.

9. (a) Explain beta oxidation of fatty acids.

Or

- (b) Discuss the biosynthesis of Purine.

10. (a) Explain the Nomenclature of enzymes.

Or

- (b) What is a Enzyme inhibitor? Explain Reversible and Irreversible inhibitors.