

S.No. 159

12PBT02

(For the candidates admitted from 2012 – 2013 onwards)

M.Sc. DEGREE EXAMINATION, APRIL/MAY 2018.

First Semester

Biotechnology

BIOLOGICAL CHEMISTRY

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Define pK_a dissociation constant.
Or
(b) Explain Second law of thermodynamics.
2. (a) Explain reducing or non-reducing sugars with example.
Or
(b) Explain the classification of Polysacharrides.
3. (a) Explain Ramachandran plot and its significances.
Or
(b) Describe the Beta-pleated sheet of protein.

4. (a) What are Flavonoids? Explain the types and synthesis of Flavonoids.

Or

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

5. (a) Explain the role of iron and state the risk due to excess and deficit level of iron.

Or

- (b) What are hormones? Explain the Classification of hormones?

PART B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) What is a Chemical bond? Explain the types of chemical Bonding?

Or

- (b) What is a Buffer? Explain the types and applications of buffers.

7. (a) Explain the process of Beta oxidation of fatty acids.

Or

- (b) What is Cholesterol? Explain the Cholesterol biosynthesis pathway.

2

S.No. 159

8. (a) Explain Amines acylation and Carboxylic acids esterification of amino acids.

Or

- (b) Explain the Biosynthesis of Purine.

9. (a) Explain the structure and function of chromosomes.

Or

- (b) What are Alkaloids? Explain the classification of Alkaloids.

10. (a) What are vitamins? Explain water soluble vitamins with examples.

Or

- (b) Explain the role of Oxytocin and Vasopressin.
-

3

S.No. 159