M. Sc. (Botany) (Sem. II) (CBCS) Examination

April / May - 2018

BOT-207 : Biochemistry

(Old Course)

Faculty Code : 003

Subject Code : 014201

Time : $2\frac{1}{2}$ Hours]   [Total Marks : 70

1 Answer the following : (Any **Seven**)   2×7=14

   (a) Distinguish between reducing and non reducing sugars with suitable example.

   (b) What are chemical properties of protein?

   (c) How does pH and temperature affect enzyme reaction?

   (d) Name the smallest aldose and ketose sugars.

   (e) What are acidic aminoacids? Give two examples.

   (f) What is activation energy?

   (g) What is ping pong mechanism of enzyme action?

   (h) Write the net reaction for TCA.

   (i) What is suicide inhibition? What is it's importance?

   (j) How are enzymes classified?

2 Describe in detail any **two** of the following :   2×7=14

   (a) Functions of lipids with suitable examples.

   (b) Beta-oxidation of fatty acids.

   (c) Structural polysaccharides.

3 Write short notes on :   2×7=14

   (a) β–sheet structure of protein

   (b) K_m and V_{max}.

OR

3 Write short notes on : 2×7=14

    (a) Secondary structure of protein

    (b) Nicotinamide nucleotides and TPP as coenzymes.

4 Describe briefly : 2×7=14

    (a) Enzyme Inhibition.

    (b) Water soluble vitamins.

5 Describe in detail any **two** of the following : 2×7=14

    (a) Describe the sequential reaction steps in glycolysis pathway and regulation.

    (b) What is Gluconeogenesis ? Write different steps of the pathway.

    (c) Describe the allosteric effectors and how they affect the enzymes.

    (d) Bioenergetics concept.

———————