

Code: 9A23301

**R09**

B.Tech II Year I Semester (R09) Supplementary Examinations December 2015

**BIOCHEMISTRY**

(Biotechnology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Write the classification of carbohydrates by giving one example with the structure for each class.
- 2 A compound 'X' is known to reversibly inhibit the enzyme 'E'. How do you establish its mode of inhibition and how do you determine its  $K_i$  value.
- 3 Discuss in detail the Glycogen metabolism and add a note on its regulation.
- 4 Explain schematically the exact sites of ATP production in the electron transport chain.
- 5 Describe the pathway for the degradation of tyrosine.
- 6 Describe the regulation of amino acid synthesis and explain the significance of  $\alpha$  -ketoglutarates in amino acid synthesis.
- 7 Describe the structure of cholesterol and explain its synthesis from squalene.
- 8 Write in detail the different steps involved in the purine biosynthesis and its regulation.

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