Registration No. : | | | | | | | | | | |

Total number of printed pages – 2

B. Tech

PCBT 4201

Third Semester Regular Examination – 2014

BIOCHEMISTRY

BRANCH(S) : BIOTECH

QUESTION CODE : H 406

Full Marks – 70

Time – 3 Hours

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*Answer Question No. **1** which is compulsory and any **five** from the rest.*

The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10

   (a) What is transcription ?

   (b) Explain relevance of HMP pathway.

   (c) "Enzymes accelerate reaction" explain the cause.

   (d) Write the name of the amino acid denoting F, T, D, N.

   (e) What is London force ?

   (f) Differentiate between apozyme and holozyme.

   (g) Explain Ramachandran plot.

   (h) What is the precursor of glutamic acid in its synthesis ?

   (i) Describe electron carriers.

   (j) Explain properties of hormones.

2. Derive mathematical expression for rate of enzyme catalysis for single substrate reaction. How different types of inhibitors effect enzyme catalysis ? 10

P.T.O.

3. Explain mechanism of oxidative phosphorylation with proper diagram at its cellular location. 10

4. (a) Explain different methods of nucleotide synthesis. 5

   (b) Explain energy yield of CA cycle. 5

5. (a) Explain Structural feature of alpha helix. 5

   (b) "Protein conformation is stabilized largely by weak interactions" Explain. 5

6. (a) Draw peptide plate structure. 5

   (b) Explain relevance of K_m 5

7. (a) Differentiate between de-novo and salvage pathway of nucleotide synthesis. 5

   (b) Explain mechanism of energy transfer during ATP mediated reactions. 5

8. Write short notes : 2.5 × 4

   (a) Vitamins

   (b) Genetic code

   (c) Protein targeting

   (d) Alpha oxidation of fatty acids.

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