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10NT45

Fourth Semester B.E. Degree Examination, June/July 2016
Bioscience& Molecular Biophysics

Time: 3 hrs. Max. Marks:100

Note: 1. ***Answer FIVE full questions, selecting at least TWO questions from each part.***
2. ***No Handbook/Charts/ Tables required.***

PART – A

1 a. What is a cell? List out different components of the cell and explain any four components with diagram. **(12 Marks)**

b. Explain the steps involved in Expression of genetic information. **(08 Marks)**

2 a. Describe the process of transcription. **(10 Marks)**

b. Explain about Ribonucleic acid (RNA)in detail. **(10 Marks)**

3 a. Give a brief note on recombinant DNA technology. **(10 Marks)**

b. Describe the signal transduction pathway, **(10 Marks)**

4 a. What are proteases and their classification? Describe the importance of protease enzyme. **(10 Marks)**

b. Write a note on nucleoside mono phosphate Rinase and Carbon fixation. **(10 Marks)**

PART – B

5 a. List out different classes of enzymes linked cell receptors? Explain any one in detail. **(10 Marks)**

b. Describe the structure of antibody with a neat labeled diagram and also mention different classes of antibodies. **(10 Marks)**

6 a. Write a note on:
i) Ramachandran diagram.
ii) Scatchard plot. **(10 Marks)**

b. Explain different interaction involved in a protein and their role in protein structure. **(10 Marks)**

7 a. Write a note on bacterial flagellar motor. What is proton motive force and sodium motive force? **(10 Marks)**

b. Write a note on chimeric myosin motors. **(05 Marks)**

c. Explain coupling and co-ordination of motors. **(05 Marks)**

8 a. Explain theory of transport using Nernst – Planks approach. **(08 Marks)**

b. Elucidate photochemical and photo biological phenomena. **(12 Marks)**

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