FACULTY OF SCIENCE
M.Sc. II-Semester (CBCS / NONCBCS) (New) Examination, May / June 2015

Subject: Biochemistry

Time: 3 hours

Max. Marks: 80

Note: Answer all questions from Part-A and Part-B. Each question carries 4 marks in Part-A and 12 marks in Part-B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

1. Describe the factors affecting the activity of an enzyme.
2. Explain the different criteria used to check the purity of the given enzyme preparation.
3. Discuss the feedback inhibition with example.
4. Derive Michaelis-Menton equation for an enzyme catalysed reactions.
5. Explain acid-base catalysis with suitable example.
6. Describe the catalytic mechanism of lysozyme.
7. Explain reporter enzymes with suitable example.
8. Write a note on caspase cascade.

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

9. a) Discuss the different ways adopted in mapping the active site of an enzyme.

   OR

   b) Describe the role of biotin and foliate coenzymes in enzyme reaction.

10. a) Describe the MWC and KNF models of cooperative binding with suitable example.

    OR

    b) Discuss about competitive enzyme inhibition with examples.

11. a) Explain the structure and mechanism of action of ribonuclease.

    OR

    b) Describe the mechanism of action and regulation of fatty acid synthase multienzyme complex.

12. a) Give a detailed account on classical and alternative pathway of complement systems.

    OR

    b) What is rDNA technology? Describe in detail about restriction endonucleases and DNA ligases involved in rDNA technology.

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