2053

B.E. (Biotechnology) Eighth Semester BIO-812: Enzyme Catalyzed Organic Synthesis

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt <u>five</u> questions in all, including Question No. I which is compulsory and selecting two questions from each Section.

x-x-x

1) Write briefly: $(1 \times 10 = 10)$ a) Name three starch hydrolyzing enzyme. b) Define competitive enzyme inhibition. c) What are side effects of ACE inhibitors? d) Define stereroselective biocatalyst? e) What is bio catalyst? Give two examples. f) Define extracellular enzyme? Give two examples. g) Define enzyme activity and specific enzyme activity? h) List two advantages and disadvantages of immobilization. i) Write down the formula for the calculation of amylase activity. j) What are the functions of protease and lipase enzyme? SECTION-A 2. a) Discuss the various methods for immobilizing enzymes. b) List taking advantages and disadvantages of biocatalyst over chemical catalyst with suitable example. (5, 5)3. a) How is chirality linked to biological activity? Describe with suitable examples. b) Explain effect of substrate concentration on enzyme activity. (6, 4)4. a) Write notes on enzymes involved for synthesis of organic solvents. b) Discuss the different type of enzyme inhibition. c) Briefly write notes on Industrial applications of enzyme. (3, 3, 4)SECTION-B 5) How are anticholesterol drug synthesized by biocatalysts. (10)6) Explain Calcium-Channel Blockers and Potassium channel openers. (10)7) Explain any two: i) Anticancer drug. ii) Antiviral compounds. iii) ACE inhibitors (5, 5)

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