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10BT63

Sixth Semester B.E. Degree Examination, Dec.2017/Jan.2018
Enzyme Technology and Biotransformation

Time: 3 hrs. Max. Marks:100

Note: *Answer FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1 a. What are the strategies needed for purification of enzymes? **(12 Marks)**
b. Explain lock and key model and induced fit model. **(08 Marks)**

2 a. Discuss acid base and covalent catalysis with examples. **(10 Marks)**
b. Explain the mechanisms of NAD and TPP with examples. **(10 Marks)**

3 Explain biological importance of:
a. ACE
b. CK isoform
c. Pseudocholinesterase
d. Acetylcholinesterase **(20 Marks)**

4 a. What are the factors affecting the stability of enzymes? **(10 Marks)**
b. Explain the following methods:
i) Initial velocity stages
ii) Rapid-reaction techniques. **(10 Marks)**

PART – B

5 a. What are the methods used in enzyme immobilization? Write a short note on. **(12 Marks)**
b. Discuss the economic argument for immobilization. **(08 Marks)**

6 a. Explain the design and construction of novel enzymes. **(12 Marks)**
b. Discuss in detail about Host-Guest complexation chemistry. **(08 Marks)**

7 a. Explain the importance of enzymes in diagnostics and therapeutics. **(10 Marks)**
b. Explain ELISA and EMIT immunoassay techniques. **(10 Marks)**

8 a. Discuss the use of proteases in food, leather and wool industries. **(12 Marks)**
b. What are the methods involved in production of glucose syrups from starch? **(08 Marks)**

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