

5105

M.Sc. (Biotechnology) New Syllabus

III Semester Examination

ENZYME TECHNOLOGY

Paper : MBT-304/MMB-304

(Common with MMB-304)

Time : Three Hours]

[Maximum Marks : 80

The candidates shall limit their answers precisely within the answer book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt all the questions carefully. Marks for the each question are given. All the parts of question no. 1 is compulsory. Justify your answer with figures and diagrams wherever necessary.

1. Short answer type questions [4 × 8 = 32 Marks]
- (a) Write down the five industrial uses of enzymes.
 - (b) How novel enzymes can be screened?
 - (c) List down the uses of enzymes in food and pharmaceuticals.
 - (d) Mention that advantages of enzymes in mobilization with suitable examples.

- (e) Draw a schematic diagram of continuous flow still tank reactor.
- (f) Make a chart describing different types of biosensors.
- (g) Write a short note on interesterification of lipids.
- (h) How high-throughput screening is done?

2. What are the factors affecting enzyme activity? Describe the enzyme inhibition by suitable equations and examples. [12]

OR

How enzyme technology is relevant in your scenario?
Write a brief about history of enzyme technology.

3. Describe the economic impact of microbial enzymes and its uses in wine, brewing and textile industry. [12]

OR

Describe the method of enzyme immobilizations with any suitable kinetic models.

4. Write down the mode of functioning of biosensors by taking example of amperometric biosensor. Draw a schematic diagram for the same. [12]

How different types of enzymatic reactors are useful in large scale enzyme production? Draw diagrams of different reactors.

5. What are artificial enzymes how they are different from natural enzymes and describe its genesis and uses. [12]

OR

How enzymatic reactions in biphasic liquid system take place? Answer with suitable diagrams and equations.

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