



RAN - 2503000504036001

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B. Sc. Microbiology (Sem. - IV) Examination April - 2025

MB-MJ-403 : Enzymology

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

B. Sc. Microbiology (Sem. - IV)

Name of the Subject :

MB-MJ-403 : Enzymology

Subject Code No.: **2503000504036001**

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labeled diagrams whenever necessary.

Q. 1. Answer the following in short: (Any ten)

10

1. In 1897, Edward Bucher extracted enzyme from which microorganism?
2. Enlist any two factors that affect enzyme activity.
3. Give the function of Hydrolases with suitable example.
4. What do you mean by prosthetic group?
5. Define metalloenzymes.
6. Give the function of NAD^+ .
7. Which factors determine the specificity of enzyme action?
8. What do you mean by irreversible inhibition?
9. Define ESI complex.
10. State the role of dialysis in enzyme purification.
11. State the enzymes that play a role in wound healing?
12. State the use of alkaline proteases in leather industry.

Q. 2. Answer the following: (Any two)

10

1. Give brief account on history of enzymes.
2. Enlist the major classes of enzymes. Discuss any two in detail
3. Write a note on Nomenclature of enzymes.

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- Q. 3. Answer the following: (Any two) 10**
1. Explain coenzyme and its characteristics.
 2. Comment on Activation of enzyme by alkali metal cations and alkaline earth metal cations.
 3. Explain Fischer's lock and Key Hypothesis with suitable diagram.
- Q. 4. Answer the following: (Any two) 10**
1. Write a note on: Characteristics of enzyme.
 2. Explain Uncompetitive Inhibition and Non-competitive Inhibition.
 3. Comment on: Chemical nature of enzyme.
- Q. 5. Answer the following: (Any two) 10**
1. Comment on Fractional denaturation by heating and Fractional precipitation with organic solvents.
 2. Explain the role of electrophoresis and chromatography technique in enzyme purification.
 3. Describe the application of enzymes in food industry.
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