



RAN-2503000504036001

B.Sc. Microbiology (NEP) (Sem.- IV) Examination October - 2025

MB-MJ-403 : Enzymology

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(૧)

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 (NEP) (Sem.- IV)

Name of the Subject :

MB-MJ-403 : Enzymology

Subject Code No.: **2503000504036001**

Seat No.:

--	--	--	--	--	--

Student's Signature

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

Q.1. Give specific answers: (Any ten)

(10)

- 1) In 1930, Northrop crystallized which enzyme from swine stomach.
- 2) State 2 characteristics of enzymes.
- 3) Give the function of Transphosphorylase enzyme.
- 4) State the function of FAD.
- 5) Define abzymes.
- 6) Define Active site of an enzyme.
- 7) Define Holoenzyme
- 8) Write the reaction catalyzed by glucokinase enzyme.
- 9) State the role of mixed inhibitors.
- 10) Name the enzymes used in dissolving blood clots?
- 11) State the factors on which the rate and direction of migration of proteins in the electric field depend upon.
- 12) State the function of Cholinesterase enzyme?

Q.2. Answer the following: (Any two) (10)

- 1) Explain chemical properties of enzymes.
- 2) Explain: Transferases and isomerases.
- 3) Explain: Various factors affecting enzyme activity.

Q.3. Answer the following: (Any two) (10)

- 1) State the characteristics of coenzyme. Enlist various coenzymes and their function.
- 2) Explain Koshland's Induced fit Hypothesis with suitable diagram.
- 3) Give an overview on Activation of enzyme by alkali metal cations and alkaline earth metal cations.

Q.4. Answer the following: (Any two) (10)

- 1) Explain the characteristics of enzyme in brief.
- 2) Explain Group Specificity, Absolute Specificity and Stereo chemical specificity.
- 3) Explain Partial inhibition and Substrate inhibition.

Q.5. Answer the following : (Any two) (10)

- 1) Comment on Fractional adsorption
- 2) Enlist various chromatographic techniques and explain their role in enzyme purification.
- 3) Write a note on the applications of enzyme in sugar and brewing industry
