

RAN-2503000504036001
S.Y.B.Sc. Ex. Theory Exam (Sem.–IV) Examination April - 2026
Microbiology : Paper-X Enzymology - Major-III (MB-MJ-403)
Time: 2 Hours]
[Total Marks: 50

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book (2) Figures to the right indicate the full marks of the question. (3) Draw neat and labelled diagrams whenever necessary.	Seat No.: Student's Signature
---	--

- Q.1. Short question, any 10 out 12. 10**
- State the difference between catalyst & enzyme.
 - Define : Metalloenzymes. Give examples.
 - State Stereo-specificity with examples.
 - Name the enzyme(s) used in tenderizing meat.
 - Give the full form of IUB
 - What are isoenzymes? Explain in short with examples.
 - What is a substrate analogue?
 - Give any 2 applications of enzymes.
 - Who coined the term “enzyme?”
 - Define : Active Site.
 - What are antimetabolites?
 - Give any 2 biological roles of enzymes.
- Q.2. Comment/Explain any 2 of the following. 10**
- Give an account of the nomenclature of enzymes.
 - The IUB system has classified enzymes into six major classes -Explain.
 - Contact between enzyme & substrate is the most essential prerequisite for enzyme activity. – Explain.
- Q.3. Answer in short/short note, any 2 of the following. 10**
- State the salient features of the active site.
 - Discuss in detail: Isoenzymes.
 - Coenzymes are second substrates. – Explain
- Q.4. Brief answer (any 2), 10**
- State the categories of enzyme inhibition. Explain any ONE in detail.
 - Explain in detail about reversible inhibition.
 - What is suicide inhibition? - Explain.

OR

- Q.4. Essay-type question (any 1) 10**
- a) Write a detailed note on enzyme inhibition.
 - b) Explain in detail about specificity of enzyme action.
- Q.5. Short notes (any 2) of the following. 10**
- a) Industrial applications of enzymes.
 - b) Preliminary procedures followed during purification of enzymes.
 - c) Biological roles of enzymes.
-