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B.Sc. (Sem. IV) Examination April - 2026

Bioscience (Microbiology) - Major : BM-MJ-401 : Enzymology

Time: 1 Hour] **[Total Marks: 25**

સૂચના : / Instructions

(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book.
(2) Draw neat and labelled diagrams wherever necessary.
(3) Figures to the right indicate full marks of the question.

Seat No.:

Student's Signature

Q. 1 Multiple choice questions. (Any Five) **(05)**

1. The complete active enzyme with cofactor is:
   a. Apoenzyme b. Holoenzyme
   c. Prosthetic group d. Substrate

2. Enzyme specificity means:
   a. Enzyme works on specific substrate
   b. Enzyme works on all substrates
   c. Enzyme works randomly
   d. Enzyme inhibits reaction

3. In lock & key model of enzyme action:
   a. Active site is flexible
   b. Active site is complementary to substrate
   c. enzyme is not specific for substrates
   d. substrates bring about change in conformation to active site

4. Which of the following is an intracellular enzyme?
   a. Lipase b. Papain
   c. Raffinose d. Cellulase

5. In competitive inhibition, inhibitor resembles:
   a. Product b. Enzyme
   c. Substrate d. Cofactor

6. The equation that describes enzyme kinetics is:
   a. Henderson equation b. Michaelis-Menten equation
   c. Arrhenius equation d. Nernst equation

Q. 2 **Answer the following questions.** **(10)**

1. Explain in brief about classification of enzymes.
2. Indued fit model of enzyme action.

OR

Q. 2 Write an essay on the different types of specificity with suitable example. **(10)**

Q. 3 Discuss in detail different types of enzyme inhibition. **(10)**

OR

Q. 3 **Answer the following questions.** **(10)**

1. Describe in brief about microbial enzymes.
2. Write a short note on applications of immobilized enzymes.

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