0302E1348

Candidate's Seat No : _____

MSc Sem.-1 Examination

402

Bio-Technology

February-2025

Time : 2-30 Hours] **[Max. Marks : 70**

Q – 1 Explain types of Glycoconjugates found in prokaryotes. (14)

OR

Q – 1 (A) Discuss the fate of pyruvate under anaerobic conditions. (07)

Q – 1 (B) Write a note on structural polysaccharides. (07)

Q – 2 Write a detailed note on Denovo synthesis of Purines. (14)

OR

Q – 2 (A) Discuss the genetic aspects of nitrogen fixation. (07)

Q – 2 (B) Write a note on Asymbiotic nitrogen fixation. (07)

Q – 3 Discuss the methods for purification of enzymes based on size, solubility and polarity. (14)

OR

Q – 3 (A) Describe the chaperon assisted protein folding with example. (07)

Q – 3 (B) Derive the Michaelis-Menton equation for equilibrium assumption. (07)

Q – 4 Describe in detail the reversible enzyme inhibition and its significance. (14)

OR

Q – 4 (A) Discuss the non – competitive inhibition of enzymes. (07)

Q – 4 (B) Discuss the role of enzymes in industrial biotechnology. Mention three examples of enzymes with their role in specific industries. (07)

Q – 5 Attempt **any seven** of the followings in brief. (14)

(1) What are Glycosaminoglycans (GAG s)?

(2) What are methanogens? Give two examples.

(3) Explain about feeder pathways.

(4) What is isoelectric point?

(5) Define Ammonification.

(6) Explain Oligopeptides.

(7) Give two examples of chemical denaturing agents for enzymes.

(8) What is Isoelectric focusing?

(9) Define Ultrafiltration.

(10) Explain Competitive inhibition.

(11) Explain Crosslinking of enzymes.

(12) Define Abzyme.