1006E562

Candidate's Seat No :_____

M.Sc Sem.-2 Examination
P - 410
Biotechnology
June 2022

Time : 2-00 Hours] **[Max. Marks : 50**

Instructions: All Questions in **Section I** carry equal marks
Attempt any **THREE** questions in **Section I**
Question IX in **Section II** is **COMPULSORY**

Section I

Q : 1 (a) Describe the submerged fermentation process for citric acid production. **(07)**

(b) Discuss production of ethanol from lignocellulosic biomass. **(07)**

Q : 2 (a) Discuss production of Table wine. **(07)**

(b) Explain microbial production of acetone-butanol. **(07)**

Q : 3 (a) write a note on siderophores and its production. **(07)**

(b) Discuss synthesis and economic importance of Riboflavin. **(07)**

Q : 4 (a) Discuss occurrence and economic importance of beta-carotene. **(07)**

(b) Explain the commercial production of Streptomycin. **(07)**

Q : 5 (a) Discuss application of lipolytic enzymes in industries. **(07)**

(b) Discuss in detail Glutamic acid fermentation. **(07)**

Q : 6 (a) Discuss ideal requirements for development of a commercial enzyme process. **(07)**

(b) Discuss applications of amylases in industries. **(07)**

Q : 7 (a) Describe the microbial production of PHA with a flow diagram. **(07)**

(b) Explain steroid transformation of estrogen by ring A aromatization. **(07)**

Q : 8 (a) Discuss in detail the fermentative production aspects of dextran. **(07)**

(b) Discuss in detail the factors influencing the microbial production of EPS. **(07)**

Section II

Q : 9 Attempt any eight of the followings. **(08)**

(1) List out different styles of Beer.

(2) State the name of fermenter used in acetic acid production.

(3) Name the organisms used for the production of cephalosporin.

(4) What is vaccine?

(5) What are endopeptidases ?

(6) Classify proteases on the basis of amino acid present in the catalytic site.

(7) What is PHBV polymer?

(8) Write two applications of xanthan.