



61648

VI Semester B.Sc. Examination, Sept./Oct. 2022
(CBCS Scheme)
BIOTECHNOLOGY – VIII
Industrial Biotechnology

Time : 3 Hours

Max. Marks : 70

Instruction : Draw a neat labeled diagram wherever necessary.

SECTION – A

I. Write short notes on the following :

(5×2=10)

- 1) Bioreactor
- 2) Log phase
- 3) Lyophilization
- 4) Inducer
- 5) Membrane filtration.



SECTION – B

II. Answer **any four** of the following :

(4×5=20)

- 6) Describe the maintenance of strain improvement by recombinant DNA method.
- 7) Give an account on fermentation media.
- 8) Explain the different types of spargers and impellers.
- 9) Discuss solid state and surface fermentation.
- 10) Explain the industrial production of beer.

P.T.O.



SECTION – C

III. Answer **any three** of the following :

(3×10=30)

- 11) Define fermenter. Explain different control system in fermenter.
- 12) What is down stream processing ? Add a note on solvent recovery and cell disruption.
- 13) Give the steps involved in production of Vitamin B₁₂.
- 14) What is SCO ? Comment on the methods of preparation and its importance.
- 15) Write a note on :
 - a) Industrial production of amylase.
 - b) Mass culturing of Spirulina.

SECTION – D

IV. Answer the following :

(10×1=10)

- 16) Name the anti foam agents.
 - 17) Inoculum.
 - 18) Name the micro-organisms used in the production of citric acid.
 - 19) Expand PHA.
 - 20) What is brewing ?
 - 21) Name the enzyme used in food industry.
 - 22) What is sterilization ?
 - 23) Name the raw materials used in penicillin production.
 - 24) What is scale up process ?
 - 25) Give an example for SCP.
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