



US – 391

VI Semester B.Sc. Examination, May 2017
(CBCS – 2016-17 & Onwards/2013-14 & Onwards) (F + R)

BIOTECHNOLOGY – VIII
Industrial Biotechnology

Time : 3 Hours

Max. Marks : 70

Instruction : Draw *neat* labelled diagrams *wherever* necessary.

SECTION – A

- I. Write short notes on the following : (5×2=10)
- 1) Inoculum and its importance.
 - 2) Bioreactor.
 - 3) Antifoam agents.
 - 4) Yoghurt.
 - 5) Polyesters.

SECTION – B

- II. Answer **any four** of the following : (4×5=20)
- 6) Describe the mutant selection method of strain improvement.
 - 7) Explain in detail about bubble column bioreactor.
 - 8) Write a detailed account on the production of PHA.
 - 9) Write the various steps involved in the production of Vitamin B₁₂.
 - 10) Explain the importance of microbial enzymes in food and detergent industry.

SECTION – C

- III. Answer **any three** of the following : (3×10=30)
- 11) Define fermenter and explain different control systems in fermenter.
 - 12) Explain in detail the techniques used in separation, extraction and concentration of products.
 - 13) Discuss various industrial applications of enzymes.
 - 14) Explain in detail about the industrial production of microbial food.
 - 15) Write a detailed account of alcoholic fermentation.

P.T.O.



SECTION - D

IV. Answer the following in **one** word or **a** sentence **each** :

(10×1=10)

- 16) Mention any one organism used in amylase production.
- 17) Define biotransformation.
- 18) What is pasteurisation ?
- 19) Name the microorganism used in industrial production of glutamic acid.
- 20) What are hops ?
- 21) Who discovered penicillin ?
- 22) What is Beer wort ?
- 23) Define lyophilization.
- 24) What is molasses ?
- 25) Expand HEPA.

SECTION - B

SECTION - C