



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.

