QP CODE: 21101099

21101099

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) EXAMINATION, APRIL 2021

Sixth Semester

B.Sc Biotechnology Model III

CORE COURSE - BT6CRT16 - INDUSTRIAL BIOTECHNOLOGY

2017 Admission Onwards

413E221D

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Define White biotechnology.
2. Define primary metabolites with an example.
3. Write down the role of crowded plate technique in industrial biotechnology.
4. State the purpose and importance of strain improvement.
5. List out the carbon sources used in fermetation medium.
6. Role of antiform agents used in fermentation media.
7. Write down the correlation between salt concentration and fermentation.
8. List out the components in a typical bioreactor.
9. 'A good fermenter should have sterilization procedure'. Support the statement.
10. Write on the advantage of Cyclone column reactor.
11. Comment on any two organic acids produced in food industry.
12. Write the advantages of cell immobilization.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Briefly explain the hazardous effects of chemical process.
14. Write about the spawn preparation.
15. Explain the methods used for screening of industrial strains.

16. Write the importance of identification of selected organisms in industrial biotechnology.

17. Discuss the important criteria for designing fermentation medium.

18. Explain about the optimization of fermentation medium.

19. Write a short note on continuous culture of microorganism.

20. Comment on the role of filtration in DSP.

21. Discuss on fermentative production of penicillin.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Discuss the applications of fermentation in industry.

23. Explain protoplast fusion and genetic engineering in strain improvement.

24. Write an account on the type of sensors used in a bioreactors.

25. Explain in detail the fermentative production of protease.

(2×10=20)