QP CODE: 22100919

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, APRIL 2022

Sixth Semester

B.Sc Biotechnology Model III

CORE COURSE - BT6CRT16 - INDUSTRIAL BIOTECNOLOGY

2017 Admission Onwards

4D4988A0

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. Write down the advantages of solid state fermentation.
2. Write down any two important applications of bioprocess in industry.
3. Define pure culture.
4. Compare prototrophs and auxotrophs.
5. Write down any two nitrogen sources used in fermentation medium .
6. Role of temperature in fermentation.
7. Define medium optimization.
8. Comment on the importance of condenser in a bioreactor.
9. Discuss on the use of baffle in a fermenter.
10. Differentiate between air lift fermenter and CSTR.
11. Differentiate broad spectrum antibiotics from narrow spectrum antibiotics.
12. Define cell immobilization.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Advantages of biological process over chemical process.

14. Explain secondary metabolites with examples.

15. Differentiate indicator dye technique and crowded plate technique.

16. Explain the role of protoplast fusion and genetic engineering in strain improvement.

17. What are the characteristics of an ideal fermentation media?

18. Distinguish between inducers and inhibitors used in fermentation.

19. Explain the microbial growth kinetics in a batch culture.

20. Give a note on the application of protease enzyme.

21. Write a note on alcohol production.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain the history of fermentation.

23. Explain any two primary or secondary screening methods.

24. Define fermentation and discuss on the importance of different parts of a fermenter/bioreactor.

25. Discuss on different chromatographic techniques used in DSP.

(2×10=20)