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(Pages : 2)

Name.....

Reg. No.....

**FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION  
NOVEMBER 2022**

Biotechnology

BTY 5B 09—BIOPROCESS TECHNOLOGY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

**Section A (Short Answer Type Questions)***Answer any ten questions  
Each question carries 2 mark.*

1. What is yield of coefficient ?
2. What is dual fermentation ?
3. What is Strain stability ?
4. What is steam trap ?
5. What is copolymerization ?
6. What is auxotroph ?
7. What is secondary metabolite ?
8. What is molasses ?
9. What is Reynolds number ?
10. What is turbidostat ?
11. Packed bed reactor.
12. What is flocculation ?

**Section B**

(10 × 2 = 20 marks)

*Paragraph type questions. Answer any six out of seven, each question carries 5 marks.*

13. What is media optimization ? Discuss the important factors to be considered here.
14. Explain the continuous fermentation process ?

Turn over

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15. Describe the ion exchange and gel filtration chromatography.
16. Explain the types of valves used in a fermenter
17. Describe different preservation methods of microorganisms.
18. Explain microbial production of Vitamin B12.
19. Discuss the industrial application of bacterial and fungal proteases.

**Section C (Essay Type Questions)**

(6 × 5 = 30)

*Answer any one questions, which carries 10 marks.*

20. What is immobilization? Explain various methods of immobilization and discuss the applications of immobilized enzymes.
21. Explain the parts of a typical fermenter with the help of suitable sketch and discuss the important parameters under consideration in a fermenter design.

(1 × 10 = 10)