

**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 ?

(10 × 2 = 20 marks)

**Section B**

*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.

$$(6 \times 5 = 30)$$

### Section C (Essay Type Questions)

Answer any one questions, which carries 10 marks.

20. What is immobilization? Explain various methods of immobilization and discuss the application 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.

$$(1 \times 10 = 10)$$