

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

SIXTH SEMESTER – NOVEMBER 2015

PB 6609/PB 6606 - FERMENTATION TECHNOLOGY

Date : 3/10/2015
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

PART-A

(10 x 2 = 20 Marks)

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY:

1. Name any two industrially important enzymes and their applications.
2. What are recombinant products?
3. Define Lyophilization.
4. What is Batch culture?
5. How is Foam controlled in a fermentor?
6. What are Biosensors?
7. Give the principle of centrifugation.
8. Define asepsis.
9. Define the principle of precipitation.
10. How is dissolved oxygen controlled?

PART-B

ANSWER THE FOLLOWING, EACH ANSWER WITHIN 500 WORDS:

DRAW DIAGRAMS WHEREVER NECESSARY:

(5x7=35 Marks)

11. a) Explain Microbial Biomass.

(OR)

- b) Give a brief account of the components in a fermentation process.

12. a) Describe growth kinetics in a Batch culture.

(OR)

- b) Explain the methods for preservation of microorganisms.

13. a) Write notes on the main components of a fermentor and their uses.

(OR)

- b) Give the computer applications in fermentation technology.

14. a) How is sterilization of equipments carried out in industrial fermentation?

(OR)

- b) How will you control temperature and pressure in fermentation?

15. a) Describe the process of effluent treatment in fermentation.

(OR)

- b) Explain the technique of chromatography in downstream processing.

PART-C

ANSWER ANY THREE OF THE FOLLOWING, EACH ANSWER WITHIN 1200 WORDS:

DRAW DIAGRAMS WHEREVER NECESSARY:

(3x15=45 Marks)

16. Explain the range of products of the fermentation.
17. Describe the media preparation in industrial fermentation.
18. Explain any two types of fermenters.
19. Discuss the types Biosensors and their applications.
20. Explain the different method adopted in downstream process.

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