



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADV. ZOOLOGY AND BIOTECH. & CHEMISTRY

FOURTH SEMESTER – NOVEMBER 2016

PB 4210 - MICROBIAL BIOTECHNOLOGY

Date: 11-11-2016
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

Part - A

(10×2 = 20 marks)

Answer the following, each within 50 words.

1. What is cloning?
2. Mention any two features of plasmids.
3. Define batch culture.
4. Cite any two applications of BGA.
5. What is biotransformation?
6. What are antibiotics?
7. What are enzymes?
8. List out any two sources of amylase.
9. What is a biosensor?
10. Name any two biopolymers and their significances.

PART - B

(5×7 = 35 Marks)

Answer the following, each within 500 words, draw diagrams and flowcharts wherever necessary.

11. a) Describe the process of agarose gel electrophoresis.

Or

- b) Write a short note on gene library.

12. a) List out the various strain improvement methods.

Or

- b) Give a brief account on the different types of fermentation process.

13. a) Describe the process of insulin production.

Or

- b) Elucidate the production of HBsAg.

14. a) Write a short note on protease.

Or

- b) Describe the process of citric acid production.

15. a) Outline the process of mushroom cultivation.

Or

- b) Write briefly about biofertilizers.

PART- C

(3×15 = 45 Marks)

Answer any three of the following, each within 1200 words, draw diagrams and flowcharts wherever necessary.

16. Give an account on the process and applications of PCR.
17. Write in detail on fermentation and bioreactors.
18. Describe the significance, fermentation and process conditions for penicillin production.
19. Discuss in detail on microbial enzymes and applications.
20. Give a detailed account on SCP - production and applications.
