



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – APRIL 2015

PB 4210 - MICROBIAL BIOTECHNOLOGY

Date : 25/04/2015

Dept. No.

Max. : 100 Marks

Time : 09:00-12:00

PART – A

Answer the following, each in about 50 words.

(10 x 2 = 20)

1. What is electrophoresis?
2. Give two examples of transgenic microbes.
3. What is idiophase?
4. Expand DSP and USP.
5. Write notes on steroid transformation.
6. Cite the role of insulin.
7. Mention about *Koji* fermentation process.
8. Cite the metabolic function of lipase and pectinase.
9. What are bioplastics?
10. Define biopesticides.

PART – B

Answer the following, each within 500 words. Draw diagrams and flow charts wherever necessary.

(5 x 7 = 35)

11. (a) Give a short account on southern blotting.

Or

- (b) Briefly describe the polymerase chain reaction.

12. (a) Give the general outline of fermentation.

Or

- (b) Describe briefly the recovery procedures of fermented products.

13. (a) Enumerate the process of HBsAg production.

Or

- (b) Give a brief account on streptomycin production.

14. (a) Explain the production of the enzyme protease.

Or

- (b) How are lipases fermented industrially?

15. (a) Write briefly on mushroom cultivation.

Or

- (b) How blue green algae (BGA) is mass produced?

PART – C

Answer any three of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary.

(3 x 15 = 45)

16. Write short notes on i) Cloning vectors ii) Restriction endonucleases.
17. Describe the range of products and the component parts of a fermentation process.
18. What are vitamins? Give an account on importance, source and production of Vitamin B₁₂.
19. Explain how glutamic acid is produced industrially?
20. What are biofertilizers? Explain the mass production of *Rhizobium*.
