



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & BIOTECHNOLOGY

FOURTH SEMESTER – APRIL 2014

PB 4210/4206/4202 - MICROBIAL BIOTECHNOLOGY

Date : 01/04/2014

Dept. No.

Max. : 100 Marks

Time : 01:00-04:00

PART – A

Answer the following, each within about 50 words only:

(10 x 2 = 20)

1. What is blotting technique?
2. List any 4 features of an ideal vector.
3. Distinguish between trophophase and idiophase.
4. Mention any four recombinant products of fermentation.
5. Define subunit vaccines.
6. Cite the major function of insulin.
7. What is koji fermentation process?
8. Mention the organisms used for the production of proteases.
9. Define Single Cell Proteins.
10. What are biopolymers?

PART – B

Answer the following, each answer within 500 words; draw diagrams wherever necessary

(5 X 7 = 35)

11. (a) Write short notes on PCR.
Or
(b) Give a brief account on restriction endonucleases.
12. (a) Draw the outline only of down stream processing.
Or
(b) Briefly describe the strain improvement strategies of industrially important microorganisms.
13. (a) Write short notes on streptomycin.
Or
(b) Elucidate the production of recombinant HBsAg.
14. (a) How amylases are produced industrially?
Or
(b) Give an account on acetic acid production.

15. (a) Give the industrial production method of Wine.

Or

(b) Briefly describe the production method of Mycorrhizal biofertilisers.

PART – C

Answer any three of the following, each within 1200 words. Draw diagrams wherever necessary
(3 X 15 = 45)

16. Give an account on the different types of cloning vectors.

17. Write short notes on :

a) Components of a fermentation process

b) Fermented product recovery and purification

18. Give a detailed account on the industrial production of vitamin B₁₂.

19. Explain the production methods of pectinases and lipases.

20. Write the entire production methodology of edible mushroom.
