



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SIXTH SEMESTER – APRIL 2015

PB 6613 - MICROBIAL TECHNOLOGY

Date : 17/04/2015
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.

01. Define fermentation.
02. What are enzymes?
03. What is the role of agitators in a fermenter?
04. What is meant by asepsis?
05. Briefly explain the production of yoghurt.
06. Write notes on beer.
07. What is antibiotic?
08. Write notes on steroids.
09. Write about bioplastics.
10. What are vaccines?

PART – B (5 x 7 = 35 marks)

ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY.

11. a. Write an account on the microbial biomass.
(OR)
b. Explain the various methods used in the improvement of microbes.
12. a. Enumerate the steps in downstream processing.
(OR)
b. Explain the different methods used in the sterilization of medium.
13. a. Write an account on the production of cheese.
(OR)
b. Outline the steps in the preparation of wine.
14. a. Describe the production of insulin in detail.
(OR)
b. Explain the steps involved in the production of vitamin B₁₂.
15. a. Comment on the application and production of protease enzyme.
(OR)
b. Give an account of commercial production of acetic acid.

PART – C

(3 x 15 = 45 marks)

ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY.

16. Write an account on isolation and preservation of industrially important microbes.
17. Explain different types of fermenter.
18. Explain mass cultivation of *Spirulina* in detail.
19. Give the source and production of Penicillin.
20. Write an essay on biofertilizers.

\$\$\$\$\$\$