



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – NOVEMBER 2014

PB 3510 - MICROBIOLOGY

Date : 31/10/2014
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

PART – A

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY:

[10 X 2 = 20]

1. What are extremophils?
2. Write the characteristics of a prokaryote.
3. Distinguish between bacilli and cocci.
4. What is axenic culture?
5. Define fermentation.
6. What are photosynthetic bacteria?
7. What are retroviruses?
8. Mention the name of any two antibiotics.
9. What is COD?
10. Mention any two uses of vinegar and lactic acid.

PART – B

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

[5 X 7 = 35]

11. a) Write about the contributions of Louis Pasteur.
(OR)
b) Describe the procedure of Gram's staining.
12. a) Describe the method of isolation and maintenance of microbial cultures.
(OR)
b) What is the type of cell division in bacteria? Write about the quantitative estimation of bacterial growth.
13. a) Briefly describe transformation.
(OR)
b) Give an account on general transduction.
14. a) Write about the vectors and control measures of rabies and AIDS.
(OR)
b) Write an account on viral vaccines.
15. a) Describe the various methods of food preservation.
(OR)
b) Write about the industrial production of vinegar.

PART – C

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

16. Write an essay on the classification of bacteria.
17. Describe the ultrastructure of a bacterial cell.
18. Describe the microbial enzymes and their applications.
19. Write an essay on the structure and multiplication of T4 bacteriophage.
20. Describe the steps involved in sewage treatment.

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