



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND CHEMISTRY

THIRD SEMESTER – NOVEMBER 2017

PB 3206/ PB 3200 - GENERAL MICROBIOLOGY

Date: 15-11-2017
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

PART – A

Answer the following, each within 50 words.

(10 x 2 = 20 Marks)

1. What are bacteriophages?
2. Comment on Whittaker's Five kingdom concept.
3. What is a pure culture?
4. List the components of G⁺ bacterial cell wall.
5. What are plasmids?
6. Define generalized transduction.
7. What do you mean heteroecious fungi?
8. Give the features of TMV.
9. Mention the uses of penicillin.
10. Enumerate the microbes involved in nitrogen cycle.

PART – B

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

(5 X 7 = 35 Marks)

11. a) Outline the classification of fungi.

OR

- b) Bring out the general characters of algae.

12. a) Explain the methods to determine microbial growth.

OR

- b) Write notes on the types of medium and their significances.

13. a) Briefly explain about gene regulation by operon model.

OR

- b) Give an account on the mechanism of bacterial transformation.

- 14.a) Mention the pathogen, symptoms and control measures of citrus canker.

OR

- b) Write short notes on little leaf of brinjal.

- 15.a) Briefly explain about microbial enzymes and their applications.

OR

- b) Explain the types of vaccines and its uses.

PART – C

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

16. Describe the classification of bacteria based on shape, cell arrangement and flagellation.
17. Elaborate on the ultrastructure of a bacterial cell.
18. Illustrate and explain the mechanism of bacterial conjugation.
19. Explain the life cycle of *Puccinia*. Add notes on symptoms and control measures.
20. Highlight the different stages of waste water treatment.