



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – APRIL 2017

PB 4508- MICROBIOLOGY

Date: 21-04-2017
09:00-12:00

Dept. No.

Max. : 100 Marks

PART- A(10×2=20marks)

Answer the following, each within 50 words.

1. What is a haemocytometer?
2. Enlist the parts of a compound microscope.
3. Define a prokaryote.
4. What is a pili?
5. What is a coenzyme?
6. Comment on Bacterial transformation.
7. What is a prophage?
8. Define capsomere.
9. What is food spoilage?
10. Define antibiotic.

PART- B

(5×7=35marks)

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

11. (a) Explain the role of bacteria in food industry.

OR

- (b) Describe the role of bacteria in an ecosystem.

12. (a) What is a culture media. Mention the preparation of any one medium used for culturing bacteria.

OR

- (b) Explain the normal sigmoid growth curve.

13. (a) Bacterial conjugation-elaborate.

OR

- (b) Mention the role of microbes in genetic engineering.

14. (a) Describe the structure of T4 bacteriophage.

OR

- (b) Explain the lysogenic cycle.

15. (a) Compare the industrial production of lactic acid and vinegar.

OR

- (b) What is VAMF? Explain its role in agriculture.

PART- C

(3×15=45marks)

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

16. What is staining? Explain Gram staining technique.
17. Write an essay on ultrastructure of bacteria.
18. Explain the process of bacterial photosynthesis.
19. Describe the lytic cycle. Add a note on the chemical composition of a bacteriophage.
20. Explain the nitrogen, carbon and phosphorus cycle.
