



# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY**

SECOND SEMESTER – APRIL 2017

## **16UPB2AL01- APPLIED MICROBIOLOGY**

Date: 27-04-2017  
01:00-04:00

Dept. No.

Max. : 100 Marks

### **Part- A**

*Answer the following, each within 50 words. (10X2=20 marks)*

1. What are plasmids?
2. Draw and label the structure of a bacteriophage.
3. Write notes on photo-organotrophs.
4. Differentiate archaeobacteria with eubacteria.
5. Define the term inoculum.
6. List any 4 factors affecting fermentation.
7. What is must?
8. Write notes on biopolymers?
9. Comment on bioflocculation.
10. What is microbial infallibility?

### **Part – B**

*Answer the following, each within 500 words. Draw diagrams and flow charts wherever necessary.  
(5 x 7 = 35 marks)*

11. (a). Give the classification of algae with suitable examples  
Or  
(b). Write the classification of bacteria based on shape and flagellation.
12. (a) Describe the structures found outer to the cell wall of bacteria.  
Or  
(b). Briefly explain the pure culture techniques.
13. (a). Write briefly on the substrates used in fermentation  
Or  
(b). List out the steps involved in product recovery.
14. (a). Write short notes on biosensors.  
Or  
(b). Outline the steps involved in Beer production.
15. (a). Give an account on aerobic waste water treatment.  
Or  
(b). Outline the xenobiotic degradation pathway with an example.

## Part – C

Answer **any three** of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary. **(3 x 15 = 45 marks)**

16. Write in detail the classification of i) fungi and ii) viruses..
17. Illustrate and explain the mechanism of bacterial conjugations.
18. Describe in detail the parts of the fermenter and its operation.
19. Enumerate the significances of microbialN-biofertilizers. How are they mass produced?
20. Write an essay on Bioleaching.

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