LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – **APRIL 2018**

16UPB3MC01– MICROBIOLOGY

Date: 03-05-2018   Dept. No.   Max. : 100 Marks
Time: 09:00-12:00

Part – A

Answer the following , each within 50 words.   **(10x2= 20 Marks)**

01. Differentiate archeobacteria and eubacteria.

02. Comment on synchronous growth curve.

03. What are merozygotes?

04. What is the contribution of Louis Pasture?

05. Mention the common symptoms of a food borne illness.

06. Distinguish between G^+ and G^- bacterial cell wall.

07. Mention the application of protease enzyme.

08. Write a note on plaque formation.

09. Mention any two salient features of virus.

10. List the microbes and its role in phosphorus cycle.

PART- B

Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary.   **(5x7 = 35 Marks)**

11. (a)Explain the importance of Bergey's manual in bacterial taxonomy.

OR

   (b)Write the differential staining techniques for microorganisms.

12. (a)Explain the culture media used for culturing bacteria *in vitro.*

OR

   (b)Illustrate the growth curve and discuss its four phases.

13. (a)Discuss the different types of bacterial conjugation methods.

OR

   (b)Write in detail the enzymatic regulation of TCA Cycle.

14. (a) Outline the classification of plant viruses.

OR

   (b)Write in detail the cultivation methods of viruses.

   15.(a)Describe the carbon cycle.

OR

   (b)Give an account of food preservation.

PART- C

Answer any three of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary. **(3x15= 45 Marks)**

16. Elaborate on the major characteristics of microbes.

17. Explain the methods to determine microbial growth.

18. Compare and contrast transduction and transformation in bacteria.

19. Give an account of the structure of T4 and λ phage.

20. Explain the Nitrogen cycle. Highlight the role of microbes in Nitrogen cycle.

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