

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

THIRD SEMESTER – NOVEMBER 2016

PB 3510 – MICROBIOLOGY

Date: 04-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART- A

(10×2=20marks)

Answer the following, each within 50 words.

1. What is Eukarya?
2. Differentiate mycoplasma cell from a protozoan cell.
3. Define coccus and enumerate its types.
4. What is a pure culture?
5. Comment on Bacteriochlorophyll .
6. What is anaerobic respiration?
7. Define capsomere.
8. What are viral vaccines?
9. Write notes on pasturization.
10. Explain the term rhizosphere.

PART- B

(5×7=35marks)

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

11. (a) Explain the Gram staining technique. Add a note on its applications.
OR
(b) Enumerate the general characteristics of microorganisms.
12. (a) Write notes on binary fission in bacteria.
OR
(b) Elaborate the direct microscopic count method of microorganisms.
13. (a) Mention some applications of microbial enzymes in food industry.
OR
(b) What is aerobic respiration? How is glucose broken down in eukaryotes?
14. (a) Discuss the structure and composition of a T4 bacteriophage.
OR
(b) Which is the causal agent of Rabies? Explain its transmission and control measures.
15. (a) What is fermentation? Add a note on production of lactic acid by fermentation.
OR
(b) Diagrammatically explain the nitrogen cycle.

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

16. Highlight the contributions of Antonie Van Leeuwenhoek, Louis Pasteur and Robert Koch .
17. Describe the ultra structure of bacteria and elaborate its various components.
18. Explain bacterial conjugation and transformation.
19. Write detailed notes on classification of plant viruses.
20. Expand the term VAM – fungi. Add a note on its production and importance.

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