



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – CHEMISTRY & ADV.ZOOLOGY

THIRD SEMESTER – NOVEMBER 2011

PB 3206/PB 3200 - GENERAL MICROBIOLOGY

Date : 11-11-2011
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

PART A (20 marks)

Answer all questions.

I. Choose the correct answer (5 x 1 = 5 marks)

1. An example for Zygomycetes fungi is
a) *Mucor* b) *Pleurotus* c) *Puccinia* d) *Saccharomyces*
2. A tuft of flagella seen on one pole is referred to as:
a) atrichous b) peritrichous c) monotrichous d) lophotrichous
3. The enzyme which joins the DNA fragments is
a) endonuclease b) exonuclease c) ligase d) protease
4. The genetic material of TMV is:
a) ssDNA b) ssRNA c) dsDNA d) dsRNA
5. Which of the following organism is dominant in a trickling filter?
a) *Xanthomonas* b) *Vibrio* c) *Zoogloea* d) *Salmonella*

II. State whether the following statements are true or false: (5 x 1 = 5 marks)

6. All mushroom fungi are edible.
7. Extreme thermophiles can live in hot springs.
8. DNA polymerases help in the synthesis of mRNA.
9. In *Puccinia*, the aeciospores are formed on the secondary host.
10. Pectinases are used in the clarification of fruit juices.

III. Complete the following. (5 x 1 = 5 marks)

11. *Rhizopus* belongs to the class _____.
12. Bacteria which can prepare their carbon requirements are called _____.
13. Transcription is facilitated by the enzyme _____.
14. The causative organism for citrus canker is _____.
15. The bacterium used in the production of cheese is _____.

IV. Answer the following, each in about 50 words. (5 x 1 = 5 marks)

16. What are colonial algae?
17. What are endospores?
18. Define specialized transduction?
19. What is chlorosis?
20. Mention the source and uses of Penicillin.

PART B

Answer the following, each answer not exceeding 350 words.
Draw diagrams wherever necessary.

(5 x 7= 35 marks)

21. a. Mention the characteristic feature of viruses.
(or)
b. Enumerate the salient features of algae.
22. a. Explain how bacteria are classified based on their shape and flagellation.
(or)
b. Discuss about nutrition in bacteria.
23. a. Write notes on transformation in bacteria.
(or)
b. Give an account on transduction in bacteria.
24. a. Write notes on the symptoms, disease cycle and control measures of citrus canker.
(or)
b. Discuss briefly about the pathogen, symptoms and control strategies of little leaf of brinjal.
25. a. Describe the events in nitrogen cycle.
(or)
b. Write notes on microbial enzymes.

PART - C

Answer **any three** of the following, each answer not exceeding 1200 words.
Draw diagrams wherever necessary.

(3 x 15= 45 marks)

26. Give a detailed account on the characteristic features and classification of fungi. Add a note on their economic importance.
27. Write notes on the isolation of bacteria and pure culture techniques..
28. Explain the process of protein synthesis in prokaryotes.
29. Describe black rust disease of wheat and its control measures.
30. Explain the processes involved in the treatment of wastewater.
