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(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2025 ONLY)

25UBY102

REG.NO. :

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI
END-OF-SEMESTER EXAMINATIONS: NOVEMBER-2025

B. Sc.-BOTANY **MAXIMUM MARKS: 75**
SEMESTER: I **TIME: 3 HOURS**

PART - III
MICROBIOLOGY AND PLANT PATHOLOGY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS. K1

1. Bright field microscope uses:_____.

   a) UV rays b) Visible light c) Electrons d) Infrared light

2. Bacteria reproduce asexually by:_____.

   a) Budding b) Binary Fission c) Conjugation d) Spore formation

3. The shape of T_4 phage is:_____.

   a) Icosahedral b) Helical c) Tadpole-like d) Filamentous

4. Pasteurization was developed by_____.

   a) Robert Koch b) Louis Pasteur c) Edward Jenner d) Alexander Fleming

5. The disease Citrus cancer is caused by:_____.

   a) Fungus b) Bacteria c) Virus d) Nematode

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. K2

6. Define microscopy.

7. Write the nutritional types of bacteria.

8. Mention any two features of viruses.

9. What is food spoilage?

10. Name the causal organism of red rot of sugarcane.

SECTION – B (5 X 5 = 25 Marks)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K3

11. a) Explain the working principle of electron microscope.

(OR)

b) Describe the structure of prions.

12. a) Classify the Bacteria according to the number and position of flagella.

(OR)

b) List and explain different bacterial growth phases.

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13.a) Describe the structure of T_4 phage.

(OR)

b) Explain the structure of HIV.

14.a) Explain any two food preservation methods.

(OR)

b) What is pasteurization? Mention its types.

15. a) Describe Koch's postulates.

(OR)

b) Describe the symptoms and control measures of TMV.

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K4 & K5

16. a) Compare bright field and electron microscope.

(OR)

b) Evaluate the economic importance of microorganisms.

17.a) Analyze bacterial reproduction methods.

(OR)

b) Discuss the ultrastructure of a bacterial cell.

18. a) Assess the stages of HIV life cycle.

(OR)

b) Explain the general characteristic features of virus.

19. a) Explain the microbial flora of milk and its control.

(OR)

b) Analyze botulism and its prevention.

20. a) Justify the role of physical, chemical and biological control in plant diseases management.

(OR)

b) Critically evaluate the Tikka disease in groundnut.

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