**(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2023 ONLY)**

**23UBY5E1**

**REG.NO. :**

**N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI**

**END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2025**

**B.Sc.-BOTANY** **MAXIMUM MARKS: 75**

**SEMESTER: V** **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. Find which of the following method can be used to determine the number of bacteria quantitatively?

a) Spread-plate b) Streak-plate c) Pour-plate and spread plate d) Pour plate

2. Recall that virus is made up of _____.

(a) Protein coat and nucleic acid (b)Protein coat and mitochondria

(c) Nucleic acid and cell membrane (d)Nucleic acid, cell wall and cell membrane

3.Choose the following immunity is obtained during a lifetime_____.

(a) Acquired immunity (b) Active immunity (c) Passive immunity (d) Innate immnity

4. Which of the organisms produces citric acid?

(a) *Clostridium*(b) *Pseudomonas* (c) *Saccharomyces* (d) *Aspergillus*

5. What is the primary purpose of Koch' postulates?

(a) To identify different types of bacteria. (b) To study plant pathogens

(c) To determine the cause of infectious diseases (d) To develop vaccines

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

6.Explain the phases in bacterial growth curve.

7.Define virus.

8.Indicate the types of innate immunity.

9.Explain Pasteurization.

10.Give the name of any two fungal diseases in plants.

### SECTION – B (5 X 5 = 25 MARKS)

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

11. a)Sketch the structure and function of bacterial cell wall.

**(OR)**

b)Describe the growth curve of bacteria.

**(CONTD……..2)**

12.a)Write a short note on general characteristic features of virus.

**(OR)**

b)Organize the structure and functions of rabies virus. .

13.a)Discuss the antibody and its types.

**(OR)**

b)Define vaccine. Explain its types.

14.a)Outline the food preservation by using chemical process.

**(OR)**

b) Discuss commercial production of vinegar and their applications.

15.a)Identify the red spot of sugarcane with reference to symptoms and its control measures.

**(OR)**

b)State an account of TMV symptoms and its control measures.

**SECTION – C (5 X 8 = 40 MARKS)**

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

**. (K4 (Or) K5)**

16. a)Prepare note on asexual reproduction in bacteria.

**(OR)**

b)Elaborate spread plate techniques and its procedure.

17.a)Explain the general structure of HIV and its mode of transmission.

**(OR)**

b)Illustrate the ultra structure of T4 phage and process of reproduction.

18. a)Classify immunity. Explain the types of Acquired immunity in detail.

**(OR)**

b)Enumerate therole of penicillin to control the growth of microorganism, and transmission.

19.a)Outline the steps involved in industrial production of citric acid. .

**(OR)**

b) Identify the coliform bacteria.by using MPN techniques.

20.a)List the symptoms ,causative disease and control measure for citrus canker.

**(OR)**

b)Compare the physical and biological control measures for plant disease.

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