

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2024 ONLY)

24PBY103

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2024
COURSE NAME: M.Sc.-BOTANY **MAXIMUM MARKS: 75**
SEMESTER: I **TIME : 3 HOURS**

APPLIED MICROBIOLOGY AND PLANT PATHOLOGY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

(K1)

1. Which of the following bacteriophages are responsible for specialised transduction?
a) T4 phages b) Lysogenic phages c) Lytic phages d) Both (b) and (c)
2. Which of the statements regarding gram staining is wrong?
a) Mycobacterium tuberculosis stains blue because of the thick lipid layer
b) Streptococcus pyogenes stains blue because of a thick peptidoglycan layer
c) Escherichia coli stains pink because of a thin peptidoglycan layer
d) Mycoplasma pneumoniae is not visible in the Gram's stain because it has no cell wall
3. Which of the following microorganisms is commonly used for producing Single Cell Protein?
a) Saccharomyces cerevisiae b) Rhizobium c) Escherichia coli d) Plasmodium
4. What is the purpose of using amylases in the food industry?
a) Breaking down fats into fatty acids b) Converting starches into sugars
c) Coagulating milk proteins d) Preserving food products
5. Which part of the potato plant is primarily affected by late blight?
a) Roots b) Stems and leaves c) Flowers d) Seeds

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES.

(K2)

6. Define virion
7. Differentiate gram positive and gram negative staining
8. Interpret FSSAI act
9. Illustrate biofuel
10. Define leaf spot disease

SECTION – B (5 X 5 = 25 MARKS)

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

11. a) List the scope of microbiology.

(OR)

- b) Describe the reproduction of bacteria.

(CONTD.....2)

- 12.a) Assess the microbial staining techniques.
(OR)
b) Examine the isolation of microbes from the infected plant tissue.
- 13.a) Examine the microbial causes of food.
(OR)
b) Short note on food borne infections.
- 14.a) List the application of immobilized cells.
(OR)
b) Describe the industrial production of antibiotics.
- 15.a) Interpret the software for the identification of plant disease .
(OR)
b) List the causative organism, control measures of bunchy top of banana.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.****(K4 (Or) K5)**

16. a) Outline the Bergey's manual of classification of bacteria.
(OR)
b) Summarize the economic importance of microbes.
- 17.a) Discuss the methods of microbial sterilization.
(OR)
b) Outline the techniques of pure culture.
18. a) Discuss fermented foods.
(OR)
b) Interpret preservation of milk and milk products.
- 19.a) Discuss the types of fermentor.
(OR)
b) Experiment the production of organic acids.
- 20.a) Outline the causative organism, control measures of red rot of sugarcane .
(OR)
b) Criticize defence mechanisms in plants.
