

(FOR THE CANDIDATES ADMITTED

22PBY103

DURING THE ACADEMIC YEAR 2022 ONLY)

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS : DECEMBER- 2022

COURSE NAME: M.Sc.-BOTANY

MAXIMUM MARKS: 50

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. A fully formed infectious viral particle is called\_\_\_\_\_.  
a) Virion                      b) Viriod                      c) Capsid                      d) Virusoid
2. Counter stain used in Gram staining is\_\_\_\_\_.  
a) crystal violet              b) safranin                      c) carbol fuschin              d) acetocarmine
3. In the high-temperature short-time (HTST) method of pasteurization, milk is exposed to a temperature of\_\_\_\_\_.  
a) 132 degree F              b) 145 degree F              c) 161 degree F              d) 120 degree F
4. Which of the following is not involved in the production of Amylase?  
a) *Rhizobium*                      b) *Aspergillus*                      c) *Bacillus*                      d) *Rhizopus*
5. Bunchy top of banana is caused by\_\_\_\_\_.  
a) TMV                      b) CMV                      c) mosaic virus                      d) BBTV

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

6. Define: Protozoa.
7. Name any two differential stains.
8. Define: Prebiotics.
9. Write any two application of citric acid.
10. What are the symptoms of blast disease?

SECTION – B

(5 X 3 = 15 MARKS)

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

11. a) Assess the scope of microbiology.  
(OR)  
b) Classify the microbes based on their structure with examples.
12. a) Comment on selective media.  
(OR)  
b) Write the isolation of microbes by streaking method .

(CONTD.....2)

- 13.a) Describe the principle of fermentation.  
(OR)  
b) Record the sources and importance of probiotics.
- 14.a) Differentiate batch and continuous fermentation.  
(OR)  
b) List the advantages of immobilization.
- 15.a) Write the components of Plant pathology.  
(OR)  
b) Write about the causal organism and symptoms of red rot of sugarcane.

**SECTION – C (5 X 5 = 25 MARKS)**

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

16. a) Explain the types of sexual reproduction in bacteria. K4  
(OR)  
b) Mention the economic importance of microbes. K5
17. a) Recommend a suitable protocol to isolate pathogen from an infected tissue. K4  
(OR)  
b) Analyse the preservation techniques of microbes. K4
18. a) Discuss the heat and Irradiation methods of sterilization. K5  
(OR)  
b) Evaluate the procedures to identify the adulteration in food. K5
- 19.a) Summarize the industrial production of Penicillin. K5  
(OR)  
b) Outline the preparation of immobilized enzyme. K4
20. a) Give an account of biochemical defense mechanism in plants against a pathogen. K5  
(OR)  
b) Write about the agricultural terrorism in India. K5

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