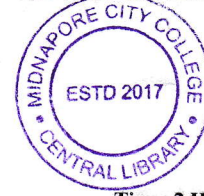


PG CBCS  
M.Sc. Semester-I Examination, 2022  
BOTANY  
PAPER: BOT 101  
(MICROBIOLOGY)



Full Marks: 40

Time: 2 Hours

**Write the answer for each unit in separate sheet**

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

**GROUP-A**

1. Answer any **FOUR** questions of the following: 4×2=8

- a) What is the significance of teichoic acid?
- b) What are the roles of SASP in imparting resistance to bacterial endospore?
- c) What is the function of leghemoglobin?
- d) What are the roles of interferon in protecting us against viral infection?
- e) What is the significance of phosphorus cycle in soil ecosystem?
- f) What is interferon?
- g) What is the basic principle of competitive ELISA?
- h) Write down steps of malolactic fermentation

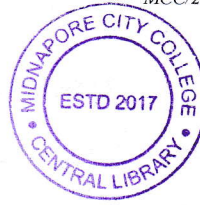
**GROUP-B**

2. Answer any **FOUR** questions of the following: 4×4=16

- a) Differentiate bacteria on the basis of flagellar position and nutritional requirements?
- b) Write a short note on SUFU production.
- c) Write down a brief note on generalized transduction.
- d) Describes Entner- Duodoroff pathway.
- e) Discuss six-kingdom system of Carl Woese.
- f) Write down the role of physical agents usually practices for preventing microbial infection.
- g) Draw the structure of IgG & IgM and mention their function.
- h) Write down the different class of antiviral drugs commonly used in HIV prevention.

P.T.O.

(2)

**GROUP-C****8×2=16****3. Answer any TWO questions of the following:**

- a) How do microbes maintain abnormal  $P^H$  and temperature in their environment? Briefly describe the different layers and chemical composition of bacterial endospore. 4+4
- b) Define the terms benign and malignant. Describe some ways by which oncogenes are activated to cause cancer 3+5
- c) Briefly describe the generation of Hfr and F strains during bacterial conjugation. Differentiate homolactic and heterolactic fermentation? 6+2
- d) Briefly discuss the one-step growth curve. Draw and discuss the structure of basal body of bacterial flagella. 3+ (3+2)

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