

BACHELOR OF SCIENCE (CBCS-2018 COURSE)
F. Y. B. Sc. Sem-II :SUMMER- 2022
SUBJECT : MICROBIOLOGY : THE DIVERSITY OF MICROBIAL WORLD

Day : Wednesday
Date : 6/7/2022

S-18332-2022

Time : 11:00 AM-02:00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figure to the right indicate **FULL** marks.
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Q.1 Attempt **ANY TWO** of the following: [12]

- a) Explain the role of *Bacillus thuringiensis* in plant protection.
- b) Giving suitable examples, explain waterborne transmission of diseases.
- c) Define the term 'Biofertilizer'. Giving suitable examples, explain the role of microorganisms in nitrogen fixation process.

Q.2 Attempt **ANY TWO** of the following: [12]

- a) Define 'Bioterrorism'. With suitable examples, explain the role of microorganisms in bioterrorism.
- b) Justify the statement that 'Corona Virus Disease 2019 (COVID - 19) mainly get transmitted through air'. Discuss similar diseases transmitted through air.
- c) Why the diseases caused by superbugs are difficult to control? Comment on 'ESKAPE therapy'.

Q.3 Attempt **ANY TWO** of the following: [12]

- a) What is 'Bioluminescence'? Explain the significance of bioluminescent bacteria in aquatic ecosystem.
- b) Draw a neat labelled diagram of 'Oxidation lagoon' and explain its significance.
- c) Explain the principle and working of 'Laminar air flow'.

Q.4 Attempt **ANY THREE** of the following: [12]

- a) Thermophiles
- b) Mutualism
- c) Halophiles
- d) Antifungal agents of *Pseudomonas fluorescens*

Q.5 Attempt **ANY FOUR** of the following: [12]

- a) What are 'Psychrophiles'? Giving suitable examples, explain their significance in ecosystem.
- b) Explain the effect of 'UV rays' on bacteria.
- c) What are Alkalophiles? Give their significance.
- d) Discuss the effect of high hydrostatic pressure on bacteria.
- e) Discuss 'Antagonism'.
- f) What are Mesophiles? Give their importance.

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