

SUBJECT: ELECTIVE: a) MICROBIAL ECOLOGY

Day : -Monday
Date : 15/04/2019

Time : 03.00 PM TO 06.00 PM
Max. Marks: 60

S-2019-1217

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
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Q.1 Explain in detail how plants defend themselves against infection. State (15) different modes of defense.

OR

Define Quantitative Ecology and describe various parameters that determine the microbial population.

Q.2 a) State different steps to preserve biodiversity. (10)

b) Explain different methods used for measurement of Microbial metabolism (05)

Q.3 Attempt **ANY THREE** of the following: (15)

- a) Describe the extreme environments and illustrate in detail environment of hot springs.
- b) Explain the mechanism of quorum sensing.
- c) Illustrate the microbial amensalism and parasitism with specific microbial examples.
- d) Describe the mechanism of Bioremediation of Gold

Q.4 Write short notes on **ANY THREE** of the following: (15)

- a) Mechanism of action of bacterial biopesticide.
- b) Mechanism responsible for recovery of petroleum
- c) Abiotic factors that limit microbial growth
- d) Fouling of biofilms

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