

**F.Y.B.Sc. SEM – II (CBCS 2018 COURSE) : SUMMER - 2019**  
**SUBJECT: MICROBIOLOGY: THE DIVERSITY OF MICROBIAL WORLD**

**Day** : Saturday  
**Date** : 04/05/2019

**Time:** 11.00 A.M TO 02.00 PM  
**Max. Marks: 60**

**S-2019-0787**

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
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**Q.1** Attempt **ANY TWO** of the following: (12)

- a) What are superbugs? Explain the ESKAPE therapy.
- b) Giving suitable examples explain the disease transmission through polluted water.
- c) Explain the significance of airborne microorganisms.

**Q.2** Attempt **ANY TWO** of the following: (12)

- a) What are Halophiles? Give their significance.
- b) Explain the construction and working of oxidation ponds.
- c) What is 'Bioterrorism'? Giving suitable examples, explain the microbial agents of bioterrorism.

**Q.3** Attempt **ANY TWO** of the following: (12)

- a) Define the term 'Bio fertilizers and comment on the use of symbiotic and non symbiotic nitrogen fixing microorganisms as Bio fertilizers.
- b) Discuss the role of *Pseudomonas fluorescens* in plant protection.
- c) Enlist the Genera of bioluminescent bacteria and explain the mechanism of 'Bioluminescence'.

**Q.4** Write short notes on **ANY THREE** of the following (12)

- a) Psychrophiles
- b) Laminar air flow
- c) Mutualism
- d) Soil microflora

**Q.5** Attempt **ANY FOUR** of the following: (12)

- a) Comment on 'Antagonism'
- b) Describe phosphate solubilizing bacteria
- c) What are 'Alkalophiles'? Give their uses.
- d) How *Bacillus thuringiensis* kills insect pests?
- e) Explain the use of UV-radiations in microbiology laboratory.
- f) What is 'oil spill'? Discuss the role of microbes for control of 'oil spill'

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