

F.Y.B.SC. SEM – II (CBCS - 2016 COURSE) : SUMMER - 2018

SUBJECT: MICROBIOLOGY: THE DIVERSITY OF MICROBIAL WORLD (MB – 22)

Day : Wednesday
Date : 18/04/2018

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

S-2018-0637

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

Q.1 A) Select the correct option and rewrite the sentences: [06]

- a) Relationship between *Pseudomonas* and *Aspergillus* is an example of _____.
 - i) Antagonism
 - ii) Commensalism
 - iii) Mutualism
 - iv) Predation
- b) Which of the following is an example of bioluminescent bacterium?
 - i) *Vibrio fischeri*
 - ii) *Lactobacillus spp.*
 - iii) *Staphylococcus aureus*
 - iv) *Escherichia coli*
- c) Filter used in laminar air flow is called as _____.
 - i) Whatmann filter paper no.1
 - ii) Whatmann filter paper no.2
 - iii) UV filter
 - iv) HEPA filter
- d) *Salmonella typhi* is an example of _____.
 - i) Psychrophile
 - ii) Mesophile
 - iii) Thermophile
 - iv) Barophile
- e) Which of the following is **not** a target organism for ESKAPE therapy?
 - i) *Clostridium tetani*
 - ii) *Enterococcus faecium*
 - iii) *Klebsiella pneumonia*
 - iv) *Staphylococcus aureus*
- f) Bioleaching of copper is a function of _____.
 - i) Acidophile
 - ii) Alkalophile
 - iii) Neutrophile
 - iv) Viruses

B) Attempt the following: [06]

- a) What is *Mycorrhizae*?
- b) Give any two examples of nitrogen fixing bacteria.
- c) Mention the effect of ultraviolet radiation.
- d) Give the significance of Mesophiles.
- e) Define bioterrorism.
- f) Mention the toxin produced by *Bacillus thuringiensis*.

P.T.O.

Q.2 Write short notes on **ANY THREE** of the following: [12]

- a) Mutualism
- b) Halophiles
- c) Oxidation lagoons
- d) Significance of *Pseudomonas fluorescens* in soil ecosystem

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

- a) Which factors will decide the microflora of soil?
- b) With suitable examples explain the importance of air microorganisms.
- c) Mention any two harmful and useful activities of sewage microflora.
- d) Give the types of 'Thermophiles'.
- e) Explain the significance of bioluminescent bacteria.

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

- a) What is superbug? Giving appropriate examples explain the control of superbugs.
- b) Describe the role of microbes in bioterrorism.
- c) Define the term 'Biofertilizer' and mention major groups of microorganisms used as biofertilizers.

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

- a) Giving suitable examples explain the 'Commensalism'.
- b) What is 'oil spill'? Explain the use of aquatic microbes for controlling oil spill.
- c) Give examples and significance of 'Barophiles'.

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