



JAI-003-1013016 Seat No. _____

Second Year B. Sc. (Sem. III) (CBCS) (W.E.F.-2016)

Examination

November – 2019

Microbiology

**Paper - MB-301 : Microbial Systematics &
Environmental Microbiology
(New Course)**

Faculty Code : 003

Subject Code : 1013016

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 A) Answer the following : 4
- 1 What is Classification ?
 - 2 Give an example of ideal molecular chronometer.
 - 3 The layered or stratified rocks that are formed by incorporation of mineral sediments into microbial mats is called
 - 4 Enlist Morphological characteristics of bacteria.
- B) Answer in brief : (any one out of two) 2
- 1 Phylogenetic classification
 - 2 What is character ? Enlist four Ecological characteristics of Bacteria.
- C) Answer in detail : (any one out of two) 3
- 1 What is Binomial nomenclature ?
 - 2 What is Numerical Taxonomy ?
- D) Write notes on : (any one out of two) 5
- 1 Taxonomic Ranks of Microorganisms
 - 2 Classification systems.
- 2 A) Answer the following : 4
- 1 The cell wall of Mycobacteria contains acid.
 - 2 Which disease is caused by Camphylobacter jejuni ?
 - 3 Write any two features of Family Vibrionaceae.
 - 4 What are Actinomycetes ?

- B) Answer in brief : (any one out of two) 2
- 1 Write about Proteobacteria.
 - 2 Give general characteristics of Gram Positive Non spore forming rods.
- C) Answer in detail : (any one out of two) 3
- 1 Explain : Phototrophic bacteria.
 - 2 Explain : Bacillus genus.
- D) Write notes on : (any one out of two) 5
- 1 Extremophiles
 - 2 Family Enterobacteriaceae.
- 3 A) Answer the following : 4
- 1 What is coenocytic mycelia ?
 - 2 Give example of two algae.
 - 3 The pseudopod is found in for uptake of food particle from environment.
 - 4 Give two examples of Higher Fungi.
- B) Answer in brief : (any one out of two) 2
- 1 Give types of fungi on the basis of mode of nutrition.
 - 2 What is cyst ? Give its role.
- C) Answer in detail : (any one out of two) 3
- 1 Describe : Structure of Algae
 - 2 Discuss : Ecology of protozoa
- D) Write notes on : (any one out of two) 5
- 1 General characteristics of Fungi
 - 2 General characteristics of Protozoa.
- 4 A) Answer the following : 4
- 1 Give two examples of Enveloped virus.
 - 2 What is Temperate phage ?
 - 3 What is PFU ?
 - 4 What is lysogeny ?

- B) Answer in brief : (any one out of two) 2
1 Enlist methods of Enumeration of viruses.
2 What are Plant viruses ?
- C) Answer in detail : (any one out of two) 3
1 Discuss : Structure of virus.
2 Describe Lytic cycle.
- D) Write notes on : (any one out of two) 5
1 Classification of Viruses
2 Cultivation of Animal virus.
- 5 A) Answer the following : 4
1 What is Environmental Microbiology ?
2 What is Biodegradation ?
3 What is air pollution ?
4 What is MEOR ?
- B) Answer in brief : (any one out of two) 2
1 What is droplet nuclei ?
2 Name the organisms causing deterioration of paper.
- C) Answer in detail : (any one out of two) 3
1 Explain Metal corrosion.
2 Explain Biomagnification of pesticides.
- D) Write a note on (any one out of two) 5
1 Methods of Air Sanitation
2 Bioremediation.
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