



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

MIC 1435

Microbial Taxonomy and Diversity

Time: 3 Hrs

Marks: 75

Answer any four out of the following

5 x 15 = 75 marks

1. How did R H Whittaker classify different life forms into five kingdom?
2. List out the features that can be used for classifying living organisms.
3. Explain the important features of Bergeys manual of systematic bacteriology.
4. Represent diagrammatically the classification of fungi based on the modes of reproduction.
5. How did Alexopolos classified the members of mycota.
6. Write about the algae life forms to classify them.
7. Do the viruses have life or not ? substantiate your answer.

The American College Madurai
Backlog arrear exam question paper
Scheme of valuation
MIC 1435
Microbial taxonomy and diversity

Answer any four out of the following **5 x15 = 75 marks**

1. How did R H Whittaker classify different life forms into five kingdoms?

Mentioning the five kingdoms along with each of their characteristics- **2.5 marks** for each Kingdom **2.5 marks** for diagrams

2. List out the features that can be used for classifying living organisms.

Habitat, morphology, nutrition, mode of reproduction and mode of life (parasitic symbiotic or saprophytic commensals etc) **3 marks** for each

3. Explain the important features of Bergey's manual of systematic bacteriology.

Overview to about Bacteria, archaebacteria, proteobacteria, eubacteria, bacteroidetes, firmicutes, spirochaetes, actinobacterfor- one mark for overview and **2 marks** for each group

4. Represent diagrammatically the classification of fungi based on the modes of reproduction.

Asexual reproduction, sexual reproduction, spore formation and its significance- **4 marks** for each, Diagram- **3 marks**

5. How did Alexopolos classified the members of mycota.

Mycology is the study of fungi body of the fungi is called as mycelium; all fungi belong to the kingdom mycota.

Kingdom mycota divided into eumycota and myxomycota-**3 marks**.

Eumycota divided into lower and higher fungi. Subdivision of the lower fungi and the higher fungi into their respective groups represented schematically - **12 marks**.

6. Write about the alga life forms to classify them.

Algae are pigmented microscopic organisms. They are classified based on the pigment that they possess and the habitat, – **2 marks**

Xanthophycophyta, Bacillariophycophyta, Phaeophycophyta, Rhodophycophyta, Chrysophycophyta, Euglenophycophyta, Cryptophycophyta and Pyrrophyphyta. Features of each group of algae listed out-**13 marks**.

7. Do the viruses have life or not? substantiate your answer by classifying the viruses.

Viruses form connecting link between living and nonliving. They behave like living organisms when inside the cell and as non-living particles when they are outside the cells. **3 Marks**

Theories on the origin and evolution of viruses **4 marks**

Classification of viruses based on host, shape, Morphology

Nature of genetic material **8 marks**