



**HCX-003-001320**

Seat No. \_\_\_\_\_

**B. Sc. (Microbiology) (Sem. III) (CBCS) Examination**

**October / November – 2017**

**MB-301 : Microbial Diversity**  
*(Old Course)*

**Faculty Code : 003**

**Subject Code : 001320**

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

[Total Marks : 70

- Instructions :**
- (1) All questions are compulsory.
  - (2) Figures on the right indicates total marks of the question.
  - (3) Draw neat diagrams wherever necessary.

**1 Answer the following : 20×1=20**

- (1) What are Stromatolites?
- (2) Sedimentary and Igneous are the types of \_\_\_\_\_.
- (3) Define Species
- (4) What is Numerical Taxonomy?
- (5) What are Archaea?
- (6) Salmonella, Shigella, Yersinia and Serratia are all \_\_\_\_\_ bacteria.
- (7) Define Endospores.
- (8) What are Spirochetes?
- (9) What is Rickettsia?
- (10) What are Sheathed Bacteria?
- (11) What is Jaccard Coefficient?
- (12) Define Barophiles.
- (13) What are Conidiospores?
- (14) Agar-agar, Carrageenin and Funori are all obtained from \_\_\_\_\_

- (15) Define Fungi
- (16) What are Protozoa?
- (17) What is Virus?
- (18) Icosahedral, Helical and Complex are the types of \_\_\_\_\_
- (19) Define Capsid
- (20) What is Plaque?

**2** (a) Answer specifically : (any **three**) **3×2=6**

- (1) What is alpha taxonomy?
- (2) What is Zooglea?
- (3) What are the locomotory organs of Protozoa?
- (4) Explain structure of TMV.
- (5) What is Thermoplasma?
- (6) What is Biodiversity? What are its types?

(b) Answer specifically : (any **three**) **3×3=9**

- (1) Discuss Whittaker's Five kingdom classification.
- (2) Discuss Dissimilatory Sulfate reducing bacteria.
- (3) Explain reproduction in Protozoa.
- (4) Discuss Lysogeny with suitable example.
- (5) Describe in brief the general features of Mycoplasma.
- (6) What are Molecular Chronometers?

(c) Write short notes on : (any **two**) **2×5=10**

- (1) Numerical taxonomy.
- (2) Photosynthetic bacteria
- (3) Economic importance of Algae
- (4) Chlamydia
- (5) Cultivation of Animal virus.

**3** (a) Answer specifically : (any **three**) **3×2=6**

- (1) What are Methanogens?
- (2) What is Houstoria?
- (3) What is Viroid?
- (4) What are fruiting bodies?
- (5) What are Cyanobacteria?
- (6) Explain SSM.

(b) Answer specifically : (any **three**) **3×3=9**

- (1) What are Actinomycetes?
- (2) Discuss Ultra structure of Algal cell.
- (3) Explain Animal virus classification.
- (4) Discuss Phylogenetic Tree.
- (5) Briefly discuss thermophiles.
- (6) Explain the methods of virus enumeration.

(c) Write short notes on : (any **two**) **2×5=10**

- (1) Extremophiles.
- (2) Major characters used in taxonomy.
- (3) Reproduction in Fungi.
- (4) Lytic lifecycle of virus.
- (5) Photosynthetic bacteria.

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