

**C 62 94**

**(Pages : 3)**

**Name.....**

**Reg. No.....**

**SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014**

**(U.G.—CCSS)**

**Core Course—Microbiology**

**MB 2B 02—MICROBIAL TAXONOMY**

**Time : Three Hours**

**Maximum : 30 Weightage**

**Part A**

**I. Objective Type Questions. Answer *all twelve* questions :**

**1 An algae used for bioassay of vitamin B<sub>12</sub> is :**

- |                        |                        |
|------------------------|------------------------|
| (a) <i>Chlorella</i> . | (b) <i>Euglena</i> .   |
| (c) <i>Spirulina</i> . | (d) <i>Spirogyra</i> . |

**2 The largest animal virus is :**

- |                  |                  |
|------------------|------------------|
| (a) TMV.         | (b) PDX virus.   |
| (c) Polio virus. | (d) Adeno virus. |

**3 The plasmid present in *agrobacterium rhizogenes* is :**

- |                  |                 |
|------------------|-----------------|
| (a) Ri plasmid.  | (b) Ti plasmid. |
| (c) Col plasmid. | (d) R plasmid.  |

**4 Which among is known as common bread mold :**

- |                    |                          |
|--------------------|--------------------------|
| (a) <i>Mucor</i> . | (b) <i>Rhizopus</i> .    |
| (c) <i>Yeast</i> . | (d) <i>Penicillium</i> . |

**5 What are cyanophages ?**

**6 What is Jaccard coefficient ?**

**7 What are molecular chronometers ?**

**8 What is phage typing ?**

**9 The type of nucleic acid present in viroids are\_\_\_\_\_**

**Turn over**

- 10 Ti plasmid is present in \_\_\_\_\_ bacterium.
- 11 A typical example of ciliated protozoa is \_\_\_\_\_
- 12 The three kingdom classification is proposed by \_\_\_\_\_

(12 x  $\frac{1}{4}$  = 3 weightage)

### Part B

II. Short Answer Type Questions. Answer all *nine* questions :

- 13 What is bacteriocin in typing ?
- 14 What are bacterioides ?
- 15 What are Aplanospores ?
- 16 What are heterocysts ?
- 17 What is DNA hyperchromicity ?
- 18 What is rRNA cataloguing ?
- 19 Brief note on phenetic classification.
- 20 Importance of ATCC.
- 21 Functions of contractile vacuoles.

(9 x 1 = 9 weightage)

### Part C

III. Short Essay or Paragraph Questions. Answer any *five* questions from seven :

- 22 Morphological characters used for bacterial classification.
- 23 Methods for cultivation of animal viruses.
- 24 ATP synthesis of *Halobacterium*.
- 25 Brief note on Enterobacteriaceae.
- 26 Clinical significance of *Aspergillus* and *Candida*.
- 27 Evolutionary significance of archaeobacteriae.
- 28 Asexual reproduction methods in protozoa.

(5 x 2 = 10 weightage)

**Part D**

IV. Essay Questions. Answer *two* questions :

29 Describe molecular approaches and use of computers in bacterial identification.

30 Classify viruses based on nucleic acid and describe various viral cultivation methods.

31 Describe sexual and asexual reproduction methods in fungi and explain how fungi are important to human beings ?

(2 x 4 = 8 weightage)