



R-3791

M. Sc. (In. Biotechnology) (Sem. III) Examination

May / June – 2010

IBT 304 : Microbiology - I

(New Syllabus)

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य लखवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
M. Sc. (In. Biotechnology) (Sem. 3)

Name of the Subject :
IBT 304 : Microbiology - 1 (New Syllabus)

Subject Code No. : **3 7 9 1** Section No. (1, 2,.....): **1&2**

Seat No. :

Student's Signature

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labelled diagrams whenever necessary.
(4) Both sections must be written in **separate** answer books.

SECTION-I

- 1 Define following terms : 6
- (a) Exomicrobiology
(b) Abiogenesis
(c) Bergey's manual
(d) Tyndallization
(e) Axenic culture
(f) Virulence.

- 2 (a) What are the three principle modes of nutrition in eukaryotic organisms? Discuss: Whittaker's five kingdom concept. 7
- (b) Discuss in detail scientific contribution of Robert Koch. 7

OR

- 2 (a) Give the scientific contribution of Louis Pasteur. 7
- (b) Explain about the three domain system of classification. 7

- 3** Write notes (any **three**): **15**
- (a) Groups of microorganisms
 - (b) Methods for classifying bacteria
 - (c) Germ theory of disease
 - (d) Numerical Taxonomy
 - (e) Applied areas of Microbiology.

SECTION-II

- 4** Define following terms : **6**
- (a) Resolving power
 - (b) Sphaeroplast
 - (c) Photolithotrophs
 - (d) Amphitrichous flagella
 - (e) SEM
 - (f) Autoradiography.
- 5** (a) Discuss : Bacteriological media **7**
(b) Give applications and limitations of electron microscopy. **7**

OR

- 5** Define pure culture and colony. Discuss in detail **14**
about the techniques for isolation of pure culture.
- 6** Write notes : (any **three**) **15**
- (a) Dark-field microscopy
 - (b) Classification of protozoa
 - (c) "Algae as food"
 - (d) Gaseous sterilization
 - (e) Classification and economic importance of Fungi.