

2053

B.A./B.Sc. (General) Second Semester  
Industrial Microbiology (Elective)  
IMB-201: Fundamentals of Microbiology – II

Time allowed: 3 Hours

Max. Marks: 33

*NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Answer the following briefly:-

- (a) Name the plating techniques used for isolation of pure culture of micro-organisms.
- (b) Define Gluconeogenesis
- (c) Define Taxonomy
- (d) Give example of Ammonifying and Denitrifying bacteria. (3+2+2+2)

UNIT - I

II. Enumerate the various ways of determining phenotypic characteristics of bacteria for classification and identification. (6)

III. Compare solid state and submerged fermentation. Give example of each. (6)

UNIT - II

IV. Discuss the various nutritional categories of micro-organisms with examples. (6)

V. Describe the following kinds of media and their uses:

- (a) Enriched media
- (b) Selective media
- (c) Differential media (6)

UNIT - III

VI. Define the concept of culture collections. What are the various methods of maintenance and preservation of micro-organisms? (6)

VII. Explain the principle and process of Lyophilization. (6)

UNIT - IV

VIII. Discuss the pathway of Kreb's cycle and discuss its significance. (6)

IX. Discuss Nitrogen fixation in symbiotic and free living system. (6)

x-x-x