

1059

B.A./B.Sc.(General)-2nd Semester**Industrial Microbiology**

MIB-201: Fundamental of Microbiology-II

Time allowed: 3 Hours

Max. Marks: 33

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.

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- I. (a) Attempt the following: -
 (i) Taxon (ii) Pure culture Nitrification
 (b) What is the basic of rRNA homology method for bacterial classification? List its advantages over DNA homology method.
 (c) Briefly describe the classification of fungi.
 (d) Give examples of Denitrifying and Ammonifying bacteria. (3+2+2+2)

UNIT-I

- II. Describe in detail the ultrastructure of Gram positive bacteria. (6)
 III. Compare anaerobic Vs aerobic fermentation. List two examples of each. (6)

UNIT-II

- IV. Explain the different types of media used for isolation of micro-organisms. (6)
 V. Classify the micro-organisms on the basis of their temperature and pH requirements and provide examples of each of these categories. (6)

UNIT-III

- VI. Compare the advantages and disadvantages of the various methods used for the preservation of microorganisms. (6)
 VII. Explain the principle and process of: -
 (a) Lyophilization
 (b) Liquid Nitrogen storage (6)

UNIT-IV

- VIII. Describe the following pathways: -
 (a) Glycolysis
 (b) Krebs's cycle (3+3)
 IX. Explain the process of nitrogen fixation and give examples of nitrogen fixation in free living and symbiotic systems. (6)

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