

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, B.Tech. (D.T.) DEGREE COURSE 2018-19**

Semester	: I (V Dean)	Academic Year	: 2018-2019
Course No.	: DM-101	Course Title	: Fundamentals of Microbiology
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Friday, 04/01/2019.	Time	: 11.00 to 13.00 Hrs

- Note :**
- 1) All questions from **Section 'A'** are compulsory.
  - 2) Solve **Any Three** questions from **Section 'B'**.
  - 3) Draw neat and well labelled diagram wherever necessary.

**SECTION –‘A’**

- Q. 1. A) State the two examples of the following organisms. (05)
- i) Bacteria
  - ii) spore
  - iii) Virus
  - iv) Yeast
  - v) Mold
- B) Answer the following question in one sentence. (05)
- i) State the importance of staining.
  - ii) Who discovered pasteurization process?
  - iii) Enlist types of microscopy.
  - iv) What do you mean by bactericidal agent?
  - v) State the role of flagella.
- Q. 2. A) Give reasons for the following sentence. (05)
- i) Fungi are included eukaryotic cell.
  - ii) Antony Van Leeuwenhoek is father of microbiology.
  - iii) The rate of spontaneous mutation is less than induced mutation.
  - iv) Soil is good source of microorganisms than water and air.
  - v) Petri dishes are inverted before incubation.
- B) Define the following. (05)
- i) Recombination
  - ii) Genes
  - iii) Mutation
  - iv) Nucleotides
  - v) Nutrition

(P.T.O.)

## SECTION – 'B'

- Q. 3    A) Explain the role of various factors affecting microbial growth. (05)  
          B) Define growth. Write a note on growth phases. (05)
- Q. 4    A) Explain in brief the work of Tyndal and Joseph Lister. (05)  
          B) Explain the microbiology of Air. (05)
- Q. 5    A) Explain bacterial growth curve with neat sketch. (03)  
          B) Give the type of RNA. (03)  
          C) Write a short note on microbiology of water. (04)
- Q. 6    A) Write a short note on viruses. (03)  
          B) Differentiate between prokaryotic and Eukaryotic microorganisms. (03)  
          C) Differentiate between gram positive and gram negative bacterial cell. (04)
- Q. 7    Describe in detail about genetic recombination in bacteria by transudation, transformation and conjugation. (10)

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