

Seat No. : _____

MK-105

July-2021

B.Sc., Sem.-I

101 : Microbiology

(Introduction to Microbial World)

Time : 2 Hours]

[Max. Marks : 50

- Instructions :** (1) Attempt any **three** questions from Q. No. 1 to Q. No. 8.
(2) Question No. 9 is compulsory.
(3) Draw figures wherever necessary.
(4) Figures to the right indicate marks.

1. (A) What is biogenesis? Describe any two experiments that disapproved abiogenesis. 7
(B) Explain the experimental studies which directly support germ theory of disease. 7
2. (A) Describe the contribution of Louis Pasteur in the development of vaccine. 7
(B) Describe the development in agriculture microbiology. 7
3. (A) Enlist and explain diverse habitats of microorganisms. 7
(B) What are prokaryotes? Describe the general characteristics of bacteria. 7
4. (A) Define eukaryotes and write a brief introduction on eukaryotes. 7
(B) Write a note on viroids and prions. 7
5. (A) Enlist the branches of biology and explain microbiology branch in detail. 7
(B) What is genetic engineering? Describe the steps of genetic manipulation. 7
6. (A) Describe the methods used for obtaining pure culture. 7
(B) Discuss the methods used for the preservation of pure culture. 7
7. (A) Describe : Dark Field Microscopy. 7
(B) Briefly explain principle and application of Phase contrast microscopy. 7

8. (A) What is staining ? Explain the mechanism of differential staining. 7
(B) Write a note on Dyes and Stains. 7
9. Give short and specific answers in **1-2** lines only : (any **eight**) 8
- (1) Write contribution of Dmitri Iwanowsky.
 - (2) What is Bullet 606 ?
 - (3) Who first made the discovery of use of cotton plug in microbiology ?
 - (4) What are antibiotics ?
 - (5) What are extremophiles ?
 - (6) Define viruses.
 - (7) What are prions ?
 - (8) Give name of any two plant diseases caused by viroids.
 - (9) What is algal bloom ?
 - (10) Define a colony.
 - (11) What is axenic culture ?
 - (12) Define Biotechnology.
 - (13) What is MTCC ?
 - (14) What are the magnifications of objective lenses ?
 - (15) Name any two fluorescent dyes used in fluorescence microscopy.
 - (16) Who discovered the Gram staining procedure ?
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