



JBD-BT-01

Seat No. _____

M. Sc. (Biotech) (Sem. I) (CBCS) Examination

December - 2019

BT - 101 : Microbiology

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 Answer the following : (Any seven out of Ten, each of 02 marks) 14
- (1) What is cold sterilization?
 - (2) What is acid-fast staining? Exemplify it.
 - (3) What are the stages of bacterial growth curve?
 - (4) What is Epidemiology?
 - (5) What is site-directed mutagenesis?
 - (6) What is homologous Recombination?
 - (7) Differentiate "Lysogenic" and "Lytic cycle" bacteriophages.
 - (8) What is TMS?
 - (9) What are antimicrobial agents?
 - (10) What is the genetic code?
- 2 Answer the following : (Any two out of three, each of 07 marks) 14
- (a) Describe filtration as a method of sterilization.
 - (b) Give classification of stains.
 - (c) Classify the microorganisms based on their nutritional requirements.
- 3 Answer the following : (a & b Both are compulsory, each of 07 marks) 14
- (a) Briefly discuss various virulence factors of microorganisms.
 - (b) What are the stages of infection? Describe it.

OR

- 3** Answer the following : (a & b Both are compulsory, each of 07 marks) **14**
- (a) Write a short note on conjugation.
 - (b) Describe various mutagenic agents with their mode of action.
- 4** Answer the following : (each of 07 marks) **14**
- (a) What is mechanism of TMV infection?
 - (b) Enlist general features of retroviruses and HIV.
- 5** Answer the following : (Any two out of four, each of 07 marks) **14**
- (a) Write a note on fungal antibiotics.
 - (b) How bacteria develop resistance against antibiotics? Describe.
 - (c) Write a short note on the transformation mechanism.
 - (d) Describe the various class of antibiotics with their mode of action.
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