

Roll No.

Total No. of Pages : 02

Total No. of Questions : 11

M.Sc. (BT) (2018 Batch) (Sem.-1)

APPLIED MICROBIOLOGY

Subject Code : MBT-102

Paper ID : [75660]

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SEVEN questions carrying SIX marks each and students have to attempt any FIVE questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Describe briefly :

- a) Bacteriophages
- b) Archea
- c) Generation time
- d) Fed batch system
- e) Primary and secondary metabolites
- f) Quorum sensing
- g) Symbiosis
- h) Biopreservatives
- i) Food additives
- j) Citric acid

SECTION-B

2. Describe the ultrastructure of Archae with suitable diagram.
3. Comment upon “*Mutagenesis is a novel method of strain improvement*”.
4. What are pathogenicity islands? Describe their role in bacterial virulence.
5. Describe briefly aerobic and anaerobic bioenergetics.
6. Describe briefly morphological and structural organization of microbes.
7. Describe briefly methods of sterilization with their merits and demerits.
8. Describe the production technology of ethanol.

SECTION-C

9. What are microbial interactions? Discuss host-pathogen interactions with suitable examples.
10. Describe various methods of food preservation with their merits and demerits.
11. What are growth kinetics? Describe the growth kinetics of batch, fed batch and continuous systems.