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**BTH 403**

**First Semester M.Sc. Degree Examination, December 2018**

**BIOTECHNOLOGY**

**(CBCS)**

**Microbiology**

Time : 3 Hours

Max. Marks : 70

**PART – A**

Write short notes on **any ten** of the following (**not exceeding 1 page each**). **(10×2=20)**

1. a) VBNC.
- b) Prototrophs.
- c) Akinete.
- d) Redox potential.
- e) Anammox.
- f) Synergism.
- g) Virusoid.
- h) Retrovirus.
- i) Nature of nucleic acid in  $\phi$ XI74.
- j) Radication.
- k) R:S ratio.
- l) Food Intoxication.

**PART – B**

Write explanatory notes on **any five** of the following (**not exceeding 3 pages each**). **(5×6=30)**

2. Classification of microorganisms.
3. Methods of nutrition uptake in microorganisms.
4. Metabolism of energy production in photosynthetic bacteria.
5. Negative interaction among microorganisms with an example.
6. Mechanisms involved in bacteriophage replication.
7. Modes of action of antibiotics.
8. Physical methods of food preservation.

**P.T.O.**



**PART – C**

Answer **any two** of the following (**not** exceeding **7** pages **each**). **(2×10=20)**

9. Write a note on microbial enumeration.
  10. Define fermentation and explain the different types of fermentation.
  11. Give an account of plant viruses.
  12. Describe the pathogenesis of tuberculosis.
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