



CCU-624

Seat No. \_\_\_\_\_

**B. Sc. (Sem. II) Examination**

October – 2019

**Microbiology : Paper-MB02**

*(Core Course)*

*[Fundamentals of Bacteriology]*

Time : 2.30 Hours]

[Total Marks : 70

- 1 (a) Discuss in detail : (any two) **14**
- (i) Arrangement, Ultra structure and functions of Flagella.
  - (ii) Size, shapes and arrangement of bacteria.
  - (iii) Comparison of gram positive cell wall and gram negative cell wall.
  - (iv) What is Endospore ? Explain in detail about Spore structure and sporulation.
- (b) Short question : (any four) **4**
- (i) Define : Capsule.
  - (ii) Protein present in flagella is called \_\_\_\_.
  - (iii) Define : Cellwall.
  - (iv) Draw the structure of Cell Membrane.
  - (v) Define : Plasmolysis.
  - (vi) Define : Motility.
- 2 (a) Discuss in detail : (any two) **14**
- (i) Nutritional requirements of bacteria.
  - (ii) Various methods for cell division of bacteria.

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[ Contd...

- (iii) Define : Growth. Explain bacterial growth curve.
  - (iv) Classification of Microbiological media.
- (b) Short question : (any three) **3**
- (i) Full form : MTCC.
  - (ii) Define : Phototrophs.
  - (iii) The size of bacteria can be best measured in \_\_\_\_ unit.
  - (iv) Give any two examples of bacteriological media.
  - (v) Bacteria that can grow in acidic pH is known as \_\_\_\_.
- 3 (a) Discuss in detail : (any two) **14**
- (i) Various chemicals used for microbial control.
  - (ii) Techniques used to sterilize heat sensitive material.
  - (iii) Mechanism of action and use of Halogen and Heavy metals.
  - (iv) Enlist the physical agents of microbial control. Explain any one.
- (b) Short question : (any four) **4**
- (i) Define : HEPA.
  - (ii) Define : Antiseptic.
  - (iii) Define : Sterilization.
  - (iv) Define : Antibiotics.
  - (v) Drinking water can be purified by derivatives of \_\_\_\_.
  - (vi) Name of any two gaseous agents used for microbial control.

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- 4 (a) Discuss in detail : (any two) 14  
(i) Write an essay on five kingdom system of Whittaker.  
(ii) Discuss in detail the methods for bacterial classification.  
(iii) Bergey's manual.  
(iv) Draw a labelled diagram of bacterial cell.  
(b) Short question : (any three) 3  
(i) Define : Taxonomy.  
(ii) Define : Genus.  
(iii) Give contribution : Carolus Linnacus.  
(iv) Name the volumes of Bergey's manual of systematic bacteriology.  
(v) Who proposed third kingdom Protista ?
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