

**USBCT-C02 - Biochemistry Paper-II (General Microbiology and Virology)**

P. Pages : 2

Time : Three Hours



**GUG/S/19/11541**

Max. Marks : 50

1. Describe in detail structure & formation of Bacterial Endospore. **10**

**OR**

- a) Draw a well labelled diagram of a typical Bacterial cell. **2½**
- b) Describe different classes of a Bacterial plasmids. **2½**
- c) Write a note on slime layer & capsule. **2½**
- d) Give three points of difference between Gram + ve & Gram - ve bacterial cell wall. **2½**

2. Describe in detail the lytic cycle of viruses. **10**

**OR**

- a) Describe the procedure of Gram staining. **2½**
- b) Briefly describe general characteristics of viruses. **2½**
- c) Write a note on chromophore and auxochrome. **2½**
- d) Briefly explain lysogeny. **2½**

3. Give a detailed account of the synchronous cultures. **10**

**OR**

Briefly describe following phases of a Bacterial growth curve.

- a) Lag phase **2½**
- b) Log phase **2½**
- c) Stationary phase. **2½**
- d) Death phase **2½**

4. Describe in detail the role of Antibiotics & sulphonamides as chemotherapeutic agent. **10**

**OR**

Describe the following-

- a) Phototrophs. **2½**
- b) Chemotrophs **2½**

c) Osmotic pressure as a physical control method. 2½

d) Role of detergents as a chemical control method. 2½

5. Answer **any ten** of the following-

a) Name any one Gram - ve bacteria. 1

b) What is episome? 1

c) Bacillus subtilis is a spore bearing organism. (True or False) 1

d) Differentiate between a stain and a dye. 1

e) What is mordant? 1

f) What is a temperate phage? 1

g) Define generation time. 1

h) What are Thermophiles? 1

i) What do you mean by viable cell count? 1

j) Define disinfection? 1

k) Name the halogen used for microbial control of water. 1

l) Moist heat is more effective than the dry heat for killing microorganisms. (True or False). 1

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