B.Sc. F.Y. (CBCS Pattern) Semester-I

USBCT-C02 - Biochemistry Paper-II - General Microbiology and Virology

P. Pages : 2 **GUG/W/24/11541**

Time : Three Hours * 4 4 9 7 * Max. Marks : 50

Notes : 1. Draw well labelled diagrams wherever necessary.

1. Describe the cell wall structure of- **10**

i) Gram positive bacteria.

ii) Gram negative bacteria.

OR

a) Write a note on general morphology of bacteria. **2½**

b) Draw a well labelled diagram of flagella. **2½**

c) Explain the f-plasmid. **2½**

d) Write a note on basis of resistance of endospore. **2½**

2. Explain the principle and technique of Gram staining in detail. **10**

OR

a) Write a note on chromophore and auxochrome. **2½**

b) Give the diagrammatic representation of lytic cycle. **2½**

c) Write a note on TMV. **2½**

d) Write a note on structure and composition of viruses. **2½**

3. Describe the growth curve and its phases in detail. **10**

OR

a) Draw a well labelled diagram of turbidostat. **2½**

b) Give the classification of Microorganisms on the basis of hydrogen ion concentration. **2½**

c) Write a note on visible cell count. **2½**

d) Explain the working of chemostat. **2½**

4. Describe the basic nutritional requirements of bacteria. **10**

OR

a) Write a note on chemotrophs. **2½**

b) Describe the autoclave as physical control method. **2½**

c) Write a note on sulphonamides as chemotherapeutic agents. **2½**

d) What are preservative and antimicrobial agents? **2½**

5. Attempt **any ten.** **1x10**

a) What is slime layer?

b) What is the function of ribosomes? (any two)

c) Define episomes.

d) Define chromogen.

e) Differentiate between stain and dye (any one point.

f) What are the stains used for acid-fast staining?

g) Define generation time.

h) What is synchronous culture?

i) What is facultative anaerobe?

j) Define sanitizer.

k) What are the halogens used for chemical control methods?

l) What is the use of Ur light in physical control?

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