

- (d) Chemical structures of nucleotides of DNA. 4
- (e) Differences between mono – saccharides and disaccharides. 4
- (f) Secondary structure of proteins. 4
6. Describe in detail different measures of central tendency. 12

OR

Describe in detail graphical presentation of data. 12

7. (a) Discuss in brief components of computer system. 4
- (b) What are output devices ? Explain in brief. 4
- (c) Explain how document is created, saved and closed in computer system. 4

OR

- (d) Give the applications of internet. 4
- (e) Discuss in brief primary memory of computer. 4
- (f) Differentiate between RAM and ROM. 4

**B.Sc. (Part-I) Semester-II Examination**  
**2S : MICROBIOLOGY**  
**(Microbiology, Biochemistry, Biostatistics and Computers)**

Time : Three Hours]

[Maximum Marks : 80

**Note :-** (i) All questions are compulsory.  
 (ii) Draw neat and labelled diagrams wherever necessary.

1. (A) Fill in the blanks :

- (i) Temperate phages are involved in \_\_\_\_ cycle of viral replication.
- (ii) Inoculating needle is sterilized by a process of \_\_\_\_.
- (iii) Long form of HEPA filter is \_\_\_\_.
- (iv) The nitrogenous base \_\_\_\_ is absent in DNA.

2

(B) Choose the correct alternative :

- (i) \_\_\_\_ is the biofertilizer organism.
- (a) Aspergillus
- (b) Staphylococcus
- (c) Rhizobium
- (d) Penicillium

(ii) \_\_\_\_\_ is used for gaseous sterilization.

- (a) Ethylene oxide
- (b) Methylene oxide
- (c) Carbon monoxide
- (d) Carbon dioxide

(iii) Peptide bond is present in \_\_\_\_\_.

- (a) Carbohydrates
- (b) Lipids
- (c) Proteins
- (d) Nucleic acids

(iv) AMP is the nucleotide of \_\_\_\_\_.

- (a) DNA
- (b) RNA
- (c) Both DNA and RNA
- (d) Neither DNA nor RNA

2

(C) Answer in **one** sentence each.

Define :

- (i) Plasmolysis
- (ii) Oligodynamic action
- (iii) Germicidal agent
- (iv) Essential amino acids.

4

2. Describe in detail structure of viruses. 12

**OR**

Describe in detail viral replication by lytic cycle. 12

3. Describe the mode of action and applications of following antimicrobial agents :

- (a) UV light 4
- (b) Heavy metals 4
- (c) Detergents. 4

**OR**

- (d) Alcohols 4
- (e) Chlorine 4
- (f) Penicillin 4

4. Describe following :

- (a) Biodegradation 4
- (b) Biopesticides 4
- (c) Fermented foods 4

**OR**

- (d) Microorganisms in chemical industry. 4
- (e) Vaccines 4
- (f) Antibiotics. 4

5. Explain :

- (a) Peptide bond and peptides. 4
- (b) Structure of nitrogenous bases. 4
- (c) Structure of DNA. 4

**OR**