

AP-436

- (d) Draw well labelled diagram of DNA. 4
- (e) Describe the classification of proteins. 4
- (f) What are monosaccharides ? Give any two examples. 4
6. (a) What is biostatistics ? Write its applications. 4
- (b) What is mean ? Explain with example. 4
- (c) How chi square test is applied for biological data ? 4

OR

- (d) What is mode ? Explain with example. 4
- (e) Briefly describe graphical distribution of data. 4
- (f) What are the different models of data presentation ? Describe any model useful for biological samples. 4
7. (a) Enlist different components of computer system with their functions. 4
- (b) Describe the applications of internet. 4
- (c) Differentiate between RAM and ROM. 4

OR

- (d) Describe in brief Input devices of computer. 4
- (e) What is CPU ? Describe its role in computer system. 4
- (f) Describe briefly the features of MS-Word. 4

B.Sc. (Part-I) Semester-II Examination

2S : MICROBIOLOGY

(Microbiology, Biochemistry, Biostatistics and Computers)

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) **ALL** the questions are compulsory.
 (2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :

- (i) _____ phage replicates by lysogenic cycle.
- (ii) _____ sugar is present in RNA.
- (iii) Monitor is an _____ device.
- (iv) _____ is an equipment used for dry heat sterilization. 2

(B) Choose the correct option for the following :

- (i) _____ system is used for classification of viruses.
- (a) LHT
- (b) LST
- (c) Bergey's Manual
- (d) None of the above

(ii) Autoclave is used for sterilization of ____.

- (a) Enzymes (b) Serum
(c) Nutrient media (d) All of the above

(iii) ____ is used as biopesticide.

- (a) *Bacillus thuringiensis*
(b) *Bacillus anthracis*
(c) *E. coli*
(d) *Rhizobium*

(iv) Glycosidic bond is present in ____.

- (a) Proteins (b) Carbohydrates
(c) Nucleic acids (d) None of the above

2

(C) Answer in **ONE** sentence :

- (i) What are biofertilizers ?
(ii) What is google ?
(iii) Continuous cell lines are derived from which cells ?
(iv) Write the names of purine bases present in DNA.

4

2. Describe in detail lysogenic cycle with well labelled diagrams. 12

OR

Describe in detail the structure of viruses. 12

3. (a) Describe control of microorganisms by osmotic pressure. 4

(b) Describe control of microorganisms using radiations. 4

(c) Differentiate between Dry Heat and Moist Heat sterilization. 4

OR

(d) Define the terms : antiseptic and sanitizer with examples of each. 4

(e) What are antibiotics ? Write the mode of action of penicillin. 4

(f) Describe the principle and working of autoclave. 4

4. What are biopesticides ? Give their advantages over chemical pesticides. Describe any two biopesticides. 12

OR

Define biodegradation and bioleaching. Describe the role of microorganisms in these two processes. 12

5. (a) Draw the structures of purines. 4

(b) What are polysaccharides ? Give two examples. 4

(c) Describe in brief classification of lipids. 4

OR