AW—1674

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

Time : Three Hours]   [Maximum Marks : 80

Note :—(1) **All** questions are compulsory.

(2) Draw well labelled diagrams wherever necessary.

1. (a) Fill in the blanks :

   (i) The long form of CPU is _____ .

   (ii) Tobacco Mosaic Virus was discovered by _____ .

   (iii) The structure of DNA was given by _____ .

   (iv) Average obtained arithmetically is called as _____ .   2

   (b) Choose the correct option :

   (i) BCG vaccine is used to prevent :

       (a) Smallpox   (b) Polio

       (c) Leprosy   (d) Tuberculosis

   (ii) Glucose is example of :

       (a) Disaccharide   (b) Polysaccharide

       (c) Monosaccharide   (d) Oligosaccharide

   (iii) Input device is :

       (a) Printer   (b) Mouse

       (c) Speaker   (d) Monitor

   (iv) Drugs that prevent the formation of the bacterial cell wall are :

       (a) Aminoglycosides   (b) Tetracyclines

       (c) Betalactams   (d) Quinolines   2

   (c) Answer in **one** sentence each :

   (i) Define viruses.

   (ii) What is disinfection ?

   (iii) Define mode.

   (iv) Define antibiotic.   4

2. (a) Describe in brief Binal Symmetry of viruses.   4

   (b) Explain the embryonated hen's egg method for cultivation of viruses.   4

   (c) Describe lysogeny.   4

OR

   (d) Describe lytic cycle of replication.   4

   (e) Define virion and bacteriophage.   4

   (f) Give the classification of DNA viruses.   4

Enlist different chemical agents used in microbial control and describe any three chemical agents. 12

OR

What is chemotherapeutic agents ? Describe any two chemotherapeutic agents used in treatment of diseases. 12

4. (a) Describe in brief bioleaching. 4

    (b) Name four microorganisms involved in food industries along with their microbial products. 4

    (c) Write the importance of biofertilizer. 4

OR

    (d) Describe in brief biofertilizer. 4

    (e) Define Vaccine. Explain the role of microorganisms in Vaccine production with suitable example. 4

    (f) Define Antibiotics. Explain the types of antibiotics. 4

5. Describe in detail classification of carbohydrates with example. 12

OR

Describe in brief classification of protein and explain elementary concept of protein structure. 12

6. (a) Write the uses of biostatistics. 4

    (b) Explain mode with suitable example. 4

    (c) Write the applications of chi-square (χ^2) test. 4

OR

    (d) Explain median with suitable example. 4

    (e) Explain student 't'-test. 4

    (f) Explain in brief frequency distribution. 4

7. (a) Describe in brief primary memory of computer. 4

    (b) Explain output devices of computer. 4

    (c) Use of internet. 4

OR

    (d) Differentiate between computer hardware and software. 4

    (e) Describe in brief MS-Word. 4

    (f) What are input devices ? Write its examples. 4