

B.Sc. (Part—II) Semester—IV Examination
4S : MICROBIOLOGY
(Medical Microbiology)

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) Antibody molecule is made up of four _____ chains.
- (ii) _____ is a death of tissue by absorption of toxins.
- (iii) Virus replication in cell is inhibited by a protein called _____.
- (iv) Streptomycin is useful as _____ spectrum antibiotic.

2

(b) Choose the correct alternative :

- (i) Cholera is a _____ borne disease.
 - (a) Vector
 - (b) Soil
 - (c) Water
 - (d) Air
- (ii) Coomb's test is an example of :
 - (a) Precipitation
 - (b) CFT
 - (c) Agglutination
 - (d) None of the above
- (iii) Immunity acquired by foetus from mother is called as :
 - (a) Racial
 - (b) Species
 - (c) Herd
 - (d) Transplacental
- (iv) Genetic material in HIV is :
 - (a) S.S.RNA
 - (b) D.S.RNA
 - (c) S.S.DNA
 - (d) D.S.DNA

2

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

- (i) Define focal infection.
- (ii) Give the long form of ELISA.
- (iii) Give the long form of CLSI.
- (iv) Define haemolysins.

4

- 2. (a) Describe vector transmission with suitable example. 4
- (b) Describe normal flora of intestinal tract. 4
- (c) Differentiate between pathogenicity and virulence. 4

OR

- (d) Describe vehicle of transmission with suitable example. 4
- (c) Differentiate between exotoxin and endotoxin. 4
- (f) Describe normal flora of upper respiratory tract. 4
3. (a) Explain delayed type of hypersensitivity. 4
- (b) Explain active immunity. 4
- (c) Enlist cells and organs of immune system. 4
- OR**
- (d) Explain type II-hypersensitivity. 4
- (e) Explain general non-specific factors. 4
- (f) Differentiate between T-Lymphocytes and B-Lymphocytes. 4
4. (a) Describe in brief structure of IgM. 4
- (b) Complement fixation test. 4
- (c) Write the properties of antigen. 4
- OR**
- (d) Describe in brief structure of IgG. 4
- (e) Explain in brief agglutination reaction. 4
- (f) Explain monoclonal antibodies. 4
5. Describe morphology, cultural characteristics, pathogenicity and laboratory diagnosis of staphylococcus aureus. 12
- OR**
- Describe morphology, cultural characteristics, pathogenicity and laboratory diagnosis of salmonella typhi. 12
6. Describe the structure, transmission, pathogenesis and preventive measures of HIV virus. 12
- OR**
- What do you mean by hydrophobia ? Describe in detail morphology, transmission and symptoms in man and laboratory diagnosis of Rabies virus. 12
7. (a) Explain inhibition of cell wall synthesis. 4
- (b) Explain Kirby-Bauer Method. 4
- (c) Draw well labelled diagram of different mechanisms of antibiotic action. 4
- OR**
- (d) Describe mode of action of Griseofulvin. 4
- (e) Explain inhibition of protein synthesis. 4
- (f) Explain broth microdilution test. 4