AT–365

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 : 2

(i) Immunity acquired by an individual during life time is known as _____.

(ii) Foreign substance which stimulates antibody formation is known as _____.

(iii) Rocky Mountain Spotted Fever is caused by _____.

(iv) Leucocidin causes lysis of _____.

(B) Choose the correct alternative : 2

(i) The largest immunoglobulin molecule containing 5 monomer, units is _____.

(a) IgG (b) IgA

(c) IgM (d) IgD

(ii) Long form of B.C.G. vaccine which protects from T.B. is _____.

(a) Bacillus—Corynebacterium—Gonococi

(b) Bacillus —Calmette— Guerin

(c) Bacillus —Corynebacterium—Guerin

(d) Bacillus—Calmette—Gonococi.

(iii) When in a patient already suffering from a disease, new infection is set up from external host, then it is known as _____.

(a) Secondary infection (b) Cross infection

(c) Mixed infection (d) Endogenous infection

(iv) Azidothymidine (AZT) is _____ agent

(a) Antibacterial (b) Antifungal

(c) Antihelminthic (d) Antiviral

(C) Answer in **one** sentence each : 4

(i) Define pathogenicity.

(ii) Give long form of AMI.

(iii) What is carrier ?

(iv) Name the disease caused by Salmonella typhi.

2. (a) Explain :

(i) Infection

(ii) Endemic disease. 4

(b) Explain transplacental or congenital mode of transmission in brief. 4

(c) Describe flora of intestinal tract in brief. 4

OR

(d) Discuss how haemolysins contribute to virulence of microorganisms. 4

(e) Describe normal flora of skin in brief. 4

(f) Describe control of air borne diseases in brief. 4

3. (a) Explain in brief spleen. 4

(b) Discuss characteristics of passive immunity in brief. 4

(c) Give any four differences between immediate and delayed hypersensitivity. 4

OR

(d) Explain phagocytosis in brief. 4

(e) Discuss artificial active immunity in brief. 4

(f) Describe Type II hypersensitivity with suitable example. 4

4. (a) What are monoclonal antibodies ? Discuss applications of monoclonal antibodies. 4

(b) Explain complement fixation test (FT) in brief. 4

(c) Explain :

(i) Haptens

(ii) Widal test. 4

OR

(d) Define precipitation. Discuss any two applications of precipitation reactions. 4

(e) Explain IgA antibodies in brief. 4

(f) Define :

(i) Haemagglutination

(ii) Antigen. 4

5. Describe morphology, pathogenicity, lab diagnosis and prophylaxis of Salmonella typhi. 12

OR

Describe morphology, pathogenicity, lab diagnosis and prophylaxis of Vibrio cholerae. 12

6. Describe morphology, pathogenicity, lab diagnosis and prophylaxis of Hepatitis 'B' Virus (HBV) in detail. 12

OR

Describe morphology, pathogenicity, lab diagnosis and prophylaxis of Polio virus in detail. 12

7. (a) Define :

(i) MIC

(ii) Narrow spectrum antibiotics. 4

(b) Discuss broth microdilution test of drug susceptibility. 4

(c) Explain mechanism of action of streptomycin with its clinical use. 4

OR

(d) Give characteristics of ideal chemotherapeutic agent. 4

(e) Discuss disc diffusion method of antimicrobial susceptibility testing. 4

(f) Explain mechanism of action of Griseofulvin with its clinical use. 4