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6. Describe in detail *Hepatitis 'B' virus* (HBV). 12

OR

Describe in detail Rabies virus. 12

7. (a) Give characteristics of ideal chemotherapeutic agents. 4

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

(c) Explain any two antibacterial agents with their clinical uses. 4

OR

(d) Discuss broth dilution method of drug susceptibility testing. 4

(e) Explain mechanism of action of Azidothymidine with its clinical use. 4

(f) Explain in brief MIC. 4

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) The long form of ELISA is _____.

(ii) B.C.G. Vaccine protects against _____.

(iii) Antibodies produced from single clone is called as _____.

(iv) _____ is degree of pathogenecity. 2

(b) Choose the correct alternative :

(i) Arthus reaction is example of _____.

(a) Type–I Hypersensitivity

(b) Type–II Hypersensitivity

(c) Type–III Hypersensitivity

(d) Type–IV Hypersensitivity

(ii) _____ acid is present in the cell wall of Mycobacterium.

(a) Teichoic acid (b) Mycolic acid

(c) Hyaluronic acid (d) Acetic acid

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(iii) Streptomycin is produced by _____.

(a) Aspergillus

(b) Penicillium

(c) Streptomyces species

(d) Rhizopus

(iv) Hydrophobia is caused by _____.

(a) HIV virus (b) Polio virus

(c) Hepatitis virus (d) Rabies virus 2

(c) Give the answer of following in **one** sentence :

(i) Define Fomite.

(ii) Which antibody can cross placenta ?

(iii) What is hapten ?

(iv) Define chemotherapy. 4

2. (a) Explain scope and classification of Epidemiology. 4

(b) Explain in brief vector transmission of disease. 4

(c) Discuss normal flora of skin. 4

OR

(d) Differentiate between pathogenicity and virulence. 4

(e) Describe control of air-borne diseases. 4

(f) Explain :

(i) Pandemic diseases

(ii) Microbial exotoxins. 4

3. (a) Explain in brief Thymus. 4

(b) Explain Phagocytosis in brief. 4

(c) Define Hypersensitivity and enlist different types of hypersensitivity. 4

OR

(d) What is immunity ? Give its classification. 4

(e) Explain in brief physiological barriers. 4

(f) Explain B-Cell in brief. 4

4. (a) What is Antigen ? Explain factors determining antigenecity. 4

(b) Explain IgG in brief. 4

(c) Explain complement fixation test. 4

OR

(d) Differentiate between agglutination and precipitation. 4

(e) Explain in brief monoclonal antibodies. 4

(f) Explain IgM in brief. 4

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

OR

Describe morphology, pathogenecity, lab diagnosis and prophylaxis of *Cl. tetani*. 12

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