H-4/35(B)/22

Roll No. .....

IV Semester Examination, 2022

M.Sc.

ZOOLOGY

Paper IV

(Immunopathology & Immunotechniques)

Time : 3 Hours] [Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 sections. Section **A** is objective type/multiple choice questions with no internal choice. Section **B** is short answer type with internal choice. Section **C** is long answer type with internal choice.*

SECTION A **1×8=8**

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. During infections such as influenza and the common cold the incubation period of virus is short and there is little time or exposure of the virus to initiate or interact with the immune system. In such a case the mechanism of defense is :

(a) Human Interferon (b) Cytokines

(c) IgG (d) IgM

P.T.O.

2. The viruses *Varicella zoster* and *Herpes* remain dormant and protected in :

(a) Cerebellum (b) Neural Ganglion

(c) Cell Membrane (d) Bowman's Capsule

3. The viruses *Epstein-Barr* virus have a life long association with the host being attached to receptors found on :

(a) *B* cells (b) *T* cells

(c) Cytotoxic *T* cells (d) *T* Helper cells

4. Where antibody or complement have no access to intracellular organisms, the human immune mechanism reacts using :

(a) Innate immunity (b) Cytotoxic *T* cells

(c) *T* Helper cells (d) Cellular immunity

5. The immunopathologic effects of HIV infection are directly related to the interaction of the virus with a receptor called :

(a) *CD*4× (b) *CXCR*4

(c) *T* Helper cells (d) *NK* cells

6. The Myeloma cells cannot use exogenous hypoxanthine to synthesize purines due to the lack of protein :

(a) *HPRT* (b) *CPT*

(c) *LHRH* (d) *HCG*

7. In 1965, Mancini introduced which technique for quantitative estimation of antigens :

(a) Single Radial Diffusion Technique

(b) Ouchterlony's Double Diffusion Technique

(c) *ELISA*

(d) *RIA*

8. Write the full form of *SDS-PAGE* ..... .

SECTION B **6×4=24**

(Short Answer Type Questions)

Note : Attempt *one* question from each unit.

Unit-I

1. Enumerate the steps involved in the immune responses during viral infections.

Or

Enumerate the steps involved in the immune responses during bacterial infections.

Unit-II

2. Describe the etiology and pathogenesis of bird flu.

Or

Describe aging and the immune factors affecting it.

Unit-III

3. Describe the characteristics of tumour cells.

Or

Explain autoimmunity giving one example.

Unit-IV

4. Describe the process and applications of Hybridoma technology.

Or

Describe any two techniques of antigen-antibody interaction.

SECTION C **12×4=48**

(Long Answer Type Questions)

Note : Attempt *one* question from each unit.

Unit-I

1. Describe the immunological processes involved during Lymphatic Filariasis.

Or

Describe the immunological processes involved during Leishmaniasis.

Unit-II

2. Describe the pathogenesis and immunology of AIDS.

Or

Describe the immune factors affecting *B*-cell and *T*-cell generated diseases.

Unit-III

3. Write an essay on Tumour Immunology.

Or

Write an essay on Transplantation Immunology.

Unit-IV

4. Describe the principle of antigen-antibody interaction and its applications.

Or

Write an essay on "Applications of immune technique in Immunodiagnostics".

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