Reg. No. :

Code No. : 5910 Sub. Code : PZOM 41

> M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2020.

> > Fourth Semester

Zoology — Core

IMMUNOLOGY

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — $(10 \times 1 = 10 \text{ marks})$

Answer ALL questions.

Choose the correct answer :

- 1. Lysozyme is present in the following secretary materials, except
 - (a) Sweat (b) Tears
 - Nasal secretion Saliva (c) (d)
- The distribution of one of the following immune 2. cell types is confined to blood circulation
 - (a) Blymphocytes (b) Mast cells
 - (c) Neutrophils (d) Tlymphocytes

(6 pages)

- 3. During development, T-cells that strongly react with self components are
 - (a) Eliminated in bone marrow
 - (b) Eliminated in thymus
 - (c) Modified in spleen
 - (d) Suppressed in blood circulation
- 4. Antigen binding site in antibody is called
 - (a) Epitope (b) Isotope
 - (c) Paratope (d) Agretope
- 5. Allergens induce
 - (a) Autoimmune disease
 - (b) Immunodeficiency
 - (c) Complement activation
 - (d) Type I hypersensitivity
- 6. The complement activation by alternate pathway is initiated by
 - (a) C1r (b) C2
 - (c) C3 (d) C5
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- 7. The immune cells primarily responsible for expression of immunological memory are
 - (a) Lymphocytes (b) Monocytes
 - (c) Mast cells (d) Eosinophils
- 8. Which one of the following is NOT an example of autoimmune diseases?
 - (a) Hashimoto's disease
 - (b) Graves' disease
 - (c) Myasthenia gravis
 - (d) Hay fever
- 9. An example of tumour antigens is
 - (a) Isoantigen (b) C-reactive protein
 - (c) α -fetoprotein (d) Oncogene
- 10. HLA typying is essential for
 - (a) Tumour treatment
 - (b) Organ transplantation
 - (c) Chemotaxis
 - (d) Lepromin test

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PART B — $(5 \times 5 = 25 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is third line of defense? Explain its importance.

Or

- (b) Explain the types immune cells derived from myeloid cell lineage.
- 12. (a) Give a brief account on functions of IgG.

Or

- (b) Describe the structure of MHC class I molecule with a neatly labelled diagram.
- 13. (a) Write a short on salient events in antigen presentation by endocytic pathway.

Or

- (b) Explain the mechanism of expression of cytotoxic reaction by natural killer cells.
- 14. (a) How does immune system respond during infection by helminth parasites?

 \mathbf{Or}

(b) Explain the types and consequences of immunodeficiency diseases.

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	[P.T.O.]

15. (a) Give an account of immune tolerance.

Or

(b) Explain antibody-mediated immune reactions against tumours.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain various defense mechanisms in gastro-intestinal tract.

Or

- (b) Describe the organisation and functional features of lymphatic system.
- 17. (a) What is major histocompatibility complex? Explain its immunological significance.

Or

- (b) Elucidate the process of complement activation by alternate pathway.
- 18. (a) Explain various sequential events in antigen presentation by cytosolic pathway.

 \mathbf{Or}

(b) How does immune system acquire immunological memory?

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19. (a) Explain any two immune reactions expressed during infection by protozoan parasites.

 \mathbf{Or}

- (b) Give a detailed account on nature of immune reactions responsible for onset and progression of any one type of auto immune diseases.
- 20. (a) Explain the basis for classification of tissue grafts and add a note on their applications in experimental immunology.

Or

(b) List out the desirable features of vaccines. Explain the preparations and applications of any two types of vaccines.

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