

This question paper contains 3 printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : 888

Unique Paper Code : 223501

G

Name of the Paper : Immunology -ZOHT 507

Name of the Course : B.Sc. (H) Zoology

Semester : V

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt Five questions in all.

Question No. 1 is compulsory.

1. (a) Define the following :

5

(i) Cross Reactivity

(ii) Avidity

(iii) Immunogen

(iv) Anaphylaxis

(v) Adjuvant.

(b) Differentiate between the following :

10

(i) Active and Passive Immunity

(ii) Primary and Secondary Lymphoid Organs

(iii) Epitope and Paratope

(iv) T_H and T_C cells

(v) Subunit and Recombinant vaccines

P.T.O.

- (c) Write the contribution/s of the following scientists : 2
- (i) Louis Pasteur
 - (ii) G. Snell, J. Dausset and B. Benacerraf
 - (iii) Robert Koch
 - (iv) Rodney R. Porter.
- (d) Expand the following : 3
- (i) ADCC
 - (ii) PAMPs
 - (iii) MAC
 - (iv) CRP
 - (v) GALT
 - (vi) HLA.
- (e) Write the Immunological significance of the following : 4
- (i) Interferons.
 - (ii) Acute phase response proteins
 - (iii) Phagocytes
 - (iv) Bursa of Fabricus.
- (f) Match the following : 3
- | | |
|-------------------------|------------------------|
| (a) Alveolar Macrophage | (i) Bone |
| (b) Histiocytes | (ii) Lung |
| (c) Kupffer Cells | (iii) Brain |
| (d) Mesangial Cells | (iv) Connective Tissue |
| (e) Microglial Cells | (v) Liver |
| (f) Osteoclasts | (vi) Kidney |

2. What is meant by innate immunity ? Explain the various barriers involved in innate immune response. 12
3. (i) Write about immunogens and describe the various properties of the immunogens that contribute to its immunogenicity. 7
- (ii) Write about the Gels and Coomb's classification of hypersensitivity. 5
4. (i) Compare the structure of MHC I and MHC II molecules. 6
- (ii) Illustrate and discuss the cytosolic pathway for processing endogenous pathway. 6
5. (i) Describe the classical pathways of activation of complement system 7
- (ii) Enumerate the biological consequences of complement activation. 5
6. (i) Explain with well labelled diagrams the various classes of immunoglobulin. 8
- (ii) Discuss various antibody-mediated effector functions. 4
7. Write short notes on any *three* : 4,4,4
- (i) T cell epitope
- (ii) Cytokines
- (iii) B cells
- (iv) Antigen Presenting Cells
- (v) Monoclonal Antibodies