

10.12.18 (M)

This question paper contains 3 printed pages.

Your Roll No.

Sl. No. of Ques. Paper : 792 IC
Unique Paper Code : 32237909
Name of Paper : Immunology
Name of Course : B.Sc. (H) Zoology : DSE - 2
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 :

- (i) Epitope
- (ii) Diapedesis
- (iii) Opsonization
- (iv) Anaphylatoxin
- (v) Allergens.

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(b) Differentiate between the following :

- (i) Affinity and Avidity
- (ii) Innate and Adaptive immunity
- (iii) IPV and OPV
- (iv) Isotype and Idiotypic
- (v) Polyclonal and Monoclonal sera.

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- (c) Write the contribution/s of the following scientists :
(i) Emil Von Behring
(ii) Jules Bordet. 2
- (d) Expand the following :
(i) HLA
(ii) TNF
(iii) GALT
(iv) MAC
(v) RIA
(vi) MASP 3
- (e) Write the immunological significance of the following :
(i) Interferons
(ii) Bursa of Fabricius
(iii) Adjuvant
(iv) APC 4
- (f) Give reasons :
(i) IgA survives the proteolytic degradation in GI tract.
(ii) Individuals whose immune systems are severely compromised should not receive live vaccines.
(iii) T cells are self-MHC restricted. 3
2. (a) Describe the basic structure of an antibody. How was the structure of antibody deduced? 8
(b) Differentiate between T cell and B cell epitopes. 4
3. (a) Explain the process of monoclonal antibody production by hybridoma technology. Add a note on clinical uses of monoclonal antibodies. 8

- (b) Briefly describe delayed type of hypersensitivity. 4
4. (a) Differentiate between primary and secondary lymphoid organs. Write a note on structure and function of lymph node. 4,4
(b) Briefly discuss subunit vaccines with appropriate examples. 4
5. (a) Describe the classical pathway of complement activation.
(b) What is an immunogen? Give reasons why all antigens are not immunogens. 6,2,4
6. (a) Illustrate and discuss the cytosolic pathway for processing endogenous antigen.
(b) Differentiate between the Primary and Secondary humoral immune response. 6,6
7. Write short notes on : (any three)
(a) Erythroblastosis Fetalis
(b) Clonal Selection Theory
(c) AIDS
(d) Cytokines. 4,4,4