[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1069 **I**

Unique Paper Code : 2232013501

Name of the Paper : Principles of Immunology

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

Semester : V

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll. No. on the top immediately on receipt of this question paper.
2. Attempt four questions including Question No. 1 which is compulsory.
3. Draw well-labelled diagrams wherever necessary.

1. (i) Define the following terms (Any four): (1×4=4)

(a) Extravasation

P.T.O.

(b) Paratope

(c) Avidity

(d) Opsonization

(e) Anaphylatoxin

(ii) Differentiate between the following: (Any three): (2×3=6)

(a) Primary and Secondary Immune Response

(b) Innate and Adaptive Immunity

(c) Exogenous and Endogenous Antigens

(d) Salk and Sabin Vaccine

(iii) Expand the following: (Any six): (0.5x6=3)

(a) PAMPs

(b) MASP

(c) MAC

(d) CLIP

(e) DTH

(f) ADCC

(g) ISCOM

(iv) Write the contribution of the following: (1x2=2)

(a) Elie Metchnikoff

(b) Jules Bordet

2. (i) Draw the basic structure of Immunoglobulin. Compare the structure and functions of IgA and IgM. (8)

(ii) Explain the experiments on the basis of which Immunoglobulin structure was deduced. (7)

3. (i) Explain the cytosolic pathway for processing of endogenous antigens. (8)

(ii) What is complement system. Explain Classical pathway of complement activation. (7)

4. (i) Describe Gell and Coomb's classification of hypersensitivity. (8)

(ii) What are the cardinal features of adaptive immunity. (7)

P.T.O.

5. (i) Give an account of different kinds of vaccines. (8)

(ii) Describe the structure and function of Class I and Class II MHC. (7)

6. Write short notes (Any three): (3x5=15)

(i) Clonal Selection Theory

(ii) Properties of Cytokines

(iii) B cell and T Cell Epitopes

(iv) Autoimmunity

(v) Monoclonal Antibodies and their applications

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