

- (b) What is active immunity? How does it differ from passive immunity?
- (c) Discuss the various attributes of adaptive immunity.
(6,6,6)
6. (a) How does foreignness and molecular size affect the immunogenicity of an immunogen?
- (b) Discuss the role of cytokines in activating the immune system.
- (c) What is humoral immune response? Discuss in detail.
(6,6,6)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3008

I

Unique Paper Code : 3184002002

Name of the Paper : Health and Body Defense System (G.E.)

Name of the Course : **B.Sc. (H) Biomedical Science (NEP-UGCF-2022)**

Semester : III

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll. No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all.
3. **Question No. 1** is compulsory.
4. Give illustrations and examples wherever required
5. Subparts of the questions should be attempted together.

1. (a) Give a brief account on the following (Any three):

(i) Cell

(ii) Contribution of Edward Jenner

(iii) Monocytes

(iv) Hapten (3 x 3 = 9)

(b) Differentiate between (Any three):

(i) ELISA and ELISPOT assay

(ii) BCR and TCR

(iii) Physical and chemical barrier

(iv) Immune system of vertebrates and invertebrates (3 x 3 = 9)

2. (a) Write short note (Any four)

(i) Bacterial defense against bacteriophage

(ii) Nonspecific immunity

(iii) Neutrophils

(iv) Mechanism of pathogen killing by macrophage

(v) Immunofluorescence microscopy

(4x3 = 12)

(b) Define health. What are the requirements of a healthy body according to health and gender?

(6)

3. (a) What are different blood group antigens? Discuss their role in transfusion reactions.

(b) Discuss the alternative pathway of complement activation in detail with suitable diagram

(c) Discuss the structure and functions of IgA.

(6,6,6)

4. Give a schematic representation and brief explanation of the following

(a) Interaction of a T_H cell with an APC

(b) Myeloid branch of hematopoiesis

(c) Western blotting (6,6,6)

5. (a) Discuss how the physical activity and emotional state affect the immune system.

P.T.O.