

2055

B.A./B.Sc. (General) Sixth Semester
Bio-Chemistry
Paper – B: Applied Bio-Chemistry – II

Time allowed: 3 Hours

Max. Marks: 45

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.

x-x-x

I. Answer the following:-

- Name two primary lymphoid organs in the immune system.
- What are cytokines?
- Write the name of two classes of immunoglobulins.
- Mention two types of enzyme-linked immunosorbent assay (ELISA).
- Name two physiological buffers in the human body.
- Write the name of two coagulation factors involved in blood clotting.
- What is neurotransmission?
- Name two excitatory neurotransmitters.
- What is the full form of PCR?

(9x1)

UNIT - I

- Describe the key components of the innate immune system in humans.
 - Explain the mechanism and role of the complement system in immune response.
- What is ELISA? Discuss its applications in disease detection.
 - Describe the principle and procedure of the Western blot technique.

(5,4)

(4,5)

UNIT - II

- Explain the intrinsic pathway of blood coagulation.
 - Describe the quaternary structure of haemoglobin and its different types.
- What is a buffer system? Explain the role of lungs in acid-base balance.
 - Discuss various types of acid-base imbalances in the human body.

(4,5)

(4,5)

UNIT - III

- Describe the structure of a skeletal muscle fiber and its components.
 - Illustrate and explain the arrangement of thin filaments in muscle contraction.

P.T.O.

(2)

- VII. (a) What is the cross-bridge cycle in muscle contraction?
(b) Outline the sequence of events in muscle contraction. (5,4)

UNIT - IV

- VIII. (a) Explain the structural organization of a neuron.
(b) Describe different types of neurons and their functions. (4,5)
- IX. (a) What is synaptic transmission? Explain the concept of end plate potential.
(b) Write a brief note on the structure and function of astrocytes. (5,4)

x-x-x