B.A./B.Sc. (General) 6th Semester Examination

1047

BIO-CHEMISTRY
Paper : B : Applied Bio-Chemistry

Time : 3 Hours]   [Max. Marks : 67

Note :– Attempt *five* questions in all, including Q. No. **1** which is compulsory and select *one* question from each Section.

1. Answer the following :

(i) Discuss the function of Vitamin K in blood clotting.

(ii) Draw a labelled diagram of an immunoglobulin.

(iii) What is the significance of two antibodies employed in ELISA ?

N–554   (1)   Turn Over

(iv) Name a stimulatory and an inhibitory neurotransmitter.

(v) Are the cardiac muscles voluntary or involuntary ? Give reasons for the support of your answer.

(vi) Define action potential and resting membrane potential.

(vii) Name the three pathways of complement activation. Define membrane attack complex (MAC).

(viii) Define antigen and hapten with a suitable example of each.

(ix) How the pH of blood strictly maintained at 7.4 ?

Section–I

2. Discuss the functions of the following cells in providing immunity :

(i) Macrophages

(ii) T_{Helper} Cells

3. Discuss the merits and demerits of RIA and ELISA.

Section–II

4. Draw the flow chart of blood clotting showing intrinsic, exterinsic and final common pathways. How fibrinogen is converted intto fibrin ?

5. Discuss the role of actin and myosin proteins in muscle contraction.

Section–III

6. Describe the regulation of muscle contraction in straited muscles explaining the functions of tropomyosin and troponin complex in this process.

7. Discuss the functions of calcium ions and calcium binding proteins in muscle contraction.

Section–IV

8. Describe the process of synaptic nerve impuse transmision with the help of suitable diagrams.

9. Draw a labelled diagram of a neuron. Differentiate between a myelinated and a non-myelinated neuron. What is the importance of myelin sheath ?