



B.Sc. (Semester – V) Examination, October/November 2016
ZOOLOGY

Human Physiology and Biochemistry

Duration : 2 Hours

Total Marks : 80

Instructions : 1) Attempt **all** questions.

2) Figures to the **right** indicate marks **allotted** to the question.

3) **Illustrate** your answer **wherever** necessary.

1. Answer **any four** of the following : **16**
- a) Structure and functions of neutrophils.
 - b) Globulins as plasma proteins.
 - c) Linear and ring structures of ribose.
 - d) Structure of neuron.
 - e) Gamma Amino Butyric Acid (GABA) as neurotransmitter.
 - f) Composition of sucrose.
2. Answer **any four** of the following : **16**
- i) Structural formulae of amino acids Alanine and Valine.
 - ii) Biological importance of fats.
 - iii) RNA polymerases in transcription.
 - iv) Role of co-enzymes in enzymatic reactions.
 - v) Functions of ligases.
 - vi) Leading and lagging strands in replication.
3. A) Describe briefly various types of anaemia. **6**
- OR
- A) Give a brief account of blood clotting process. **6**
- B) Describe the structure and functions of erythrocytes. **6**



4. A) Discuss physiological changes occurring during sleep. 6
- OR
- A) Write an account on origin of nerve impulse. 6
- B) What are homo polysaccharides ? Write a note on the occurrence, composition and biological role of starch. 6
5. A) Discuss briefly various chemical bonds involved in tertiary structure of proteins. 6
- OR
- A) Describe the secondary structure of proteins. 6
- B) Give an account of cholesterol and its biological importance. 6
6. A) What are isoenzymes ? Illustrate with a suitable example. 6
- OR
- A) Describe competitive inhibition of enzyme activity. 6
- B) Give an account of chain initiation during translation. 6

OR

A) Give a brief account of blood clotting process.

B) Describe the structure and functions of erythrocytes.