

- (b) Describe various factors involved in blood coagulation. 6
9. (a) Describe the origin and conduction of heartbeat. 8
- (b) Describe cardiac cycle. 8

Roll No.

Exam Code : J-21

Subject Code—52572

B. Sc. EXAMINATION

(Main & Re-appear)

(Batch 2018 Onwards)

(Third Semester)

ZOOLOGY

ZOO301L Paper–VII

Physiology and Biochemistry–I

Time : 3 Hours

Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

1. (a) All or none rule.
(b) Action potential.
(c) Differentiate Red and White muscle fibre.
(d) What is lactose intolerance ?
(e) Haldane effect.

- (f) Residual volume.
- (g) Explain the role of vitamin K in blood clotting.
- (h) Differentiate between S. A. node and A. V. node. **2×8=16**

Unit I

- 2. (a) What is synapse ? Explain transmission of nerve impulse through a synapse. **8**
- (b) What is nerve impulse ? Describe generation and transmission of nerve impulse in a non-myelinated nerve fibre. **8**
- 3. (a) Explain the electrical and biochemical changes in muscle contraction. **8**
- (b) Describe the ultrastructure of a skeletal muscle fibre. **8**

Unit II

- 4. (a) Describe active absorption of amino acid. **6**
- (b) Explain the mechanism of absorption of fat in human alimentary canal of man. **10**

- 5. (a) Define pulmonary ventilation. Explain its mechanism. **10**
- (b) Write a short note on Tidal volume and vital capacity of Lung. **3+3**

Unit III

- 6. (a) Explain oxygen dissociation curve. Describe various factors affecting the oxygen dissociation curve. **8**
- (b) Describe the structure of nephron of mammalian kidney. **8**
- 7. (a) Explain the role of counter-current mechanism in regulating urine concentration. **10**
- (b) Describe the process of ultrafiltration in Bowman's capsule. **6**

Unit IV

- 8. (a) Describe the internal structure of human heart with the support of a labelled diagram. **10**