

**B.Sc. (Part—III) Semester—V Examination**  
**ZOOLOGY**  
**(Animal Physiology and Economics Zoology)**

Time : Three Hours]

[Maximum Marks : 80

**N.B.** :— (1) All questions are compulsory.

(2) Question No. 1 carries 8 marks and remaining SIX questions carry 12 marks each.

(3) Illustrate your answer with suitable diagram wherever necessary.

1. (A) Fill in the blanks :

- (i) Clumping of blood cells is known as \_\_\_\_\_.
- (ii) The junction between neuron and muscle is called \_\_\_\_\_.
- (iii) Skeletal muscles is commonly called as \_\_\_\_\_.
- (iv) \_\_\_\_\_ promotes normal development and activity of the thyroid gland. 2

(B) Choose correct alternative from the following :

- (v) Hemoglobin is found in :
  - (a) Muscle
  - (b) Red blood cells
  - (c) Kidney
  - (d) Backbone
- (vi) Which of the following is the structural unit of the nervous system :
  - (a) Alveoli
  - (b) Nephron
  - (c) Neuron
  - (d) Leucocyte
- (vii) The process of sperm production takes place in :
  - (a) Epididymis
  - (b) Vasdeferens
  - (c) Prostate gland
  - (d) Seminiferous tubules
- (viii) Pituitary gland known as the 'Master' endocrine gland is under the control of :
  - (a) Pineal gland
  - (b) Adrenal gland
  - (c) Hypothalamus
  - (d) Thyroid gland 2

(C) Answer in one sentence each :

- (ix) Define respiratory pigment.
- (x) What is Bipolar neuron ?
- (xi) Define muscle fatigue.
- (xii) Give any two examples of beneficial insects. 4

2. Attempt the following :
- (a) Haemoglobin
  - (b) Structure of Human heart (diagram only)
  - (c) Transportation of  $O_2$ .
- OR**
- (d) Functions of blood
  - (e) Haemoeyanin
  - (f) Structure of gills (diagram only). 12
3. Describe the Neuromuscular Junction.
- OR**
- Describe the mechanism of Muscle Contraction. 12
4. Give an account :
- (g) E.M. structure of Neuron (diagram only)
  - (h) Acetylcholine
  - (i) Hormones of Islets of Langerhan's.
- OR**
- (j) Myelinated and non-myelinated nerve fibres (diagram only)
  - (k) Acromegaly
  - (l) Synaptic transmission 12
5. Attempt the following :
- (m) Hormonal control of reproduction in male
  - (n) Functions of Placenta
  - (o) Poikilotherms.
- OR**
- (p) Diestrous phase
  - (q) Osmoregulation in aquatic animals
  - (r) Estrous cycle. 12
6. Describe the following :
- (s) Economic importance of spiders
  - (t) Uses of Honey
  - (u) Pest of Jowar.
- OR**
- (v) Life cycle of *Bombyx mori* (diagram only)
  - (w) Economic importance of rodents
  - (x) Types of Honeybee. 12
7. Describe the Chinese Circular Hatchery.
- OR**
- Describe the Monoculture, Polyculture and Penculture. 12