

**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) Haemocyanin
  - (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 Pisciculture. 12