

B.Sc. Part—III (Semester—V) Examination

ZOOLOGY

(Animal Physiology and Economic Zoology)

Time : Three Hours]

[Maximum Marks : 80

Note :— (1) All questions are compulsory.

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

(3) Illustrate your answers with suitable diagrams wherever necessary.

1. (A) Fill in the blanks :

(i) The blood of crustaceans contains _____ respiratory pigment.

(ii) When Ca^{++} binds the troponin then _____ removed from actin filament.

(iii) The warm blooded animals are called as _____.

(iv) The removal of pituitary gland from the fish is called as _____.

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(B) Choose correct alternative from the following :

(v) The raptorial legs are present in :

- (a) Spider
- (b) Mantis
- (c) Lady bugs
- (d) Soldier beetle

(vi) Which of the following glands contains β cells:

- (a) Pituitary
- (b) Thyroid
- (c) Adrenal
- (d) Islets of Langerhans

(vii) Fish fry (fries) are kept in :

- (a) Nursery pond
- (b) Rearing pond
- (c) Stocking pond
- (d) Breeding pond.

(viii) Each haemoglobin molecule carries :

- (a) 1 molecule of O_2

7. Describe the following :

- (s) Inorganic fertilizers
- (t) Hypophysation
- (u) Cage culture

OR

- (v) Chinese circular hatchery (working)
- (w) Rearing pond
- (x) Integrated aquaculture.

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(b) 2 molecules of O_2

(c) 3 molecules of O_2

(d) 4 molecules of O_2 . 2

(C) Answer in **one** sentence :

(ix) What is sarcomere ?

(x) What is synapse ?

(xi) What is thermoregulation ?

(xii) What is polyculture ? 4

2. Attempt the following :

(a) Structure of lung

(b) Haemoglobin

(c) Functions of blood.

OR

(d) Structure of Gill

(e) Hemocyanin

(f) Blood plasma. 12

3. Describe structure of Neuromuscular junction.

OR

Describe muscle contraction by sliding filament theory.

12

4. Describe E.M. structure of Neuron.

OR

Describe synapse and synaptic transmission. 12

5. Give an account on :

- (g) Proliferative phase
- (h) Structure of mammalian placenta
- (i) Ammonotelism.

OR

- (j) Estrous phase
- (k) Hormonal control of reproduction in male
- (l) Poikilothermic animals. 12

6. Attempt the following :

- (m) Economic importance of spider
- (n) Pests of stored foodgrains
- (o) Importance of Honey

OR

- (p) Soldier beetle
- (q) Economic importance of snakes
- (r) Importance of silk. 12