

63/1 (SEM-3) CC6/ZOOHC3066

2022

(Held in 2023)

ZOOLOGY

Paper : ZOOHC3066

**(Physiology : Controlling and
Coordinating System)**

Full Marks : 60

Pass Marks : 24

Time : 3 hours

***The figures in the margin indicate full marks
for the questions***

**1. Choose the correct options from the
following : 1×5=5**

(a) Cartilage cells are called

(i) osteocytes

(ii) osteoclast

(iii) chondrocytes

(iv) neuron

(b) Node of Ranvier is found in

- (i) cell body
- (ii) dendron
- (iii) axon
- (iv) dendrite

(c) Leydig cells are found in

- (i) seminiferous tubules
- (ii) ovary
- (iii) liver
- (iv) testis

(d) Cavity of sphenoid bone is called

- (i) acetabulum
- (ii) sella turcica
- (iii) synovial cavity
- (iv) glenoid cavity

(e) FSH is secreted by

- (i) pituitary gland
- (ii) thyroid gland
- (iii) adrenal gland
- (iv) ovary

2. Answer the following questions : $2 \times 5 = 10$

- (a) Mention two functions of blood.
- (b) Write two differences between spermatogenesis and oogenesis.

(c) Name two functions of bones.

(d) Mention two differences between striated and non-striated muscles.

(e) What are the main differences between diabetes insipidus and diabetes mellitus?

3. Answer any five questions : $5 \times 5 = 25$

(a) Describe the structure of a neuron.

(b) Write briefly about saltatory transmission.

(c) Describe briefly about sliding filament theory of muscle contraction.

(d) Describe the ultrastructure of skeletal muscle.

(e) Pancreas is a compound gland. Justify the statement.

(f) Write about the chemical nature of hormone.

(g) Write briefly about reflex action and its types.

4. Answer any two of the following questions : $10 \times 2 = 20$

(a) Describe in brief about the propagation of nerve impulse through the non-myelinated nerve fibre.

(4)

(b) What do you mean by endocrine gland? Explain the histological structure of thyroid gland with a labelled sketch. Mention the important function of thyroxine. $2+5+3=10$

(c) What is gametogenesis? Describe in brief about spermatogenesis with labelled sketch.
