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3 SEM TDC ZOOH (CBCS) C 6

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(Held in January/February, 2022)

ZOOLOGY

(Core)

Paper : C-6

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

Full Marks : 53

Pass Marks : 21

Time : 3 hours

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

1. Fill in the blanks : 1×5=5

- (a) Blood is a type of ____ tissue.
- (b) Human chorionic gonadotropic hormone is secreted by ____.
- (c) Muscle filaments are known as ____.
- (d) The sperms of seminiferous tubules are nourished by ____ cells.
- (e) ____ gland is also known as third eye.

(2)

2. Distinguish between the following (any two) :

3×2=6

(a) Simple squamous and brush-bordered ciliated cuboidal epithelium

(b) Cartilage and bone

(c) Isotonic and isometric muscle contractions

3. Write illustrative notes on the following (any two) :

3×2=6

(a) Histology of pituitary gland

(b) Neurotransmitter

(c) Placental hormone

(d) Function of somatotropic hormone

4. Write short notes on the following (any two) :

4½×2=9

(a) Ultrastructure of seminiferous tubule

(b) Oogenesis

(c) Menstrual cycle

(d) Thyroxine hormone

5. What is neuron? Describe the propagation of action potential along the myelinated and non-myelinated nerve fibres.

1+8=9

(3)

Or

What is reflex action? Discuss about its types.

1+8=9

6. Describe the ultrastructure of skeletal muscle with illustrative diagram. 6+3=9

Or

Explain the chemical basis of muscle contraction.

9

7. What do you mean by signal transduction? Describe the mechanism of action of steroidal and non-steroidal hormones. 2+7=9

Or

Describe the structure and functions of neuromuscular junction. Compare between cardiac and smooth muscle fibres.

6+3=9

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