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3 SEM TDC ZOOH (CBCS) C 6

2021

(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.

(Turn Over)

2. Distinguish between the following (any two) :

$3 \times 2 = 6$

- (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) :

$3 \times 2 = 6$

- (a) Histology of pituitary gland
- (b) Neurotransmitter
- (c) Placental hormone
- (d) Function of somatotropic hormone

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

$4\frac{1}{2} \times 2 = 9$

- (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
