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3 (Sem-3/CBCS) ZOO HC 2

2023

ZOOLOGY

(Honours Core)

Paper : ZOO-HC-3026

(Animal Physiology : Controlling and Coordinating Systems)

Full Marks : 60

Time : Three hours

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

1. Answer the following/Choose the correct answer : $1 \times 7 = 7$

(a) Transitional epithelium is found on

(i) Stomach

(ii) Lungs

(iii) Liver

(iv) Urinary bladder

Contd.

(b) The synaptic vesicles at neuromuscular junction discharge

- (i) Adrenaline
- (ii) Epinephrine
- (iii) Acetylcholine
- (iv) None of the above

(c) A small band of dense, white and fibrous elastic tissue is grouped as

- (i) Ligament
- (ii) Muscle junction
- (iii) Muscle filament
- (iv) Muscle cartilage

(d) The longest bone in the body is

- (i) Femur
- (ii) Radius
- (iii) Hip Bone
- (iv) Ilium

(e) Which of the following tissue envelopes the bone ?

- (i) Periosteum
- (ii) Pericardium
- (iii) Myocardium
- (iv) None of the above

(f) Spongy bones do not have a haversian system. (True **or** False)

(g) Ovulation generally takes place at the _____ of a menstrual cycle.

- (i) Day 12
- (ii) Day 14
- (iii) Day 16
- (iv) Day 28

2. Answer the following questions : $2 \times 4 = 8$

(a) Mention the posterior pituitary hormones with their functions.

(b) What is tetanus ?

(c) Describe the structure of neuromuscular junction.

(d) What is bone arification ?

3. Answer the following questions : (**any three**)
 $5 \times 3 = 15$

(a) What is bone ? Describe different types of bones with example.

(b) Describe briefly the characteristics of muscle twitch.

(c) Describe the structure of thyroid gland with labelled diagram.

- (d) What is Reflex action ? Describe with example.
- (e) Classify epithelial tissue with example.
4. (a) Describe the structure of connective tissue with neat and labelled diagram. $7+3=10$

Or

- (b) What is nerve impulse ? Describe the process of nerve impulse conduction through unmyelinated nerve fibre. $2+8=10$
5. (a) What is puberty ? Describe the role of hormones involved in puberty. $2+8=10$

Or

- (b) Describe the process of signal transduction for non-steroidal hormones. 10
6. (a) Describe the physiology of vision with neat and labelled diagram. $7+3=10$

Or

- (b) Describe the molecular and chemical basis of muscle contraction. $5+5=10$