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 : 1×7=7

   (a) Transitional epithelium is found on

   (i) Stomach

   (ii) Lungs

   (iii) Liver

   (iv) Urinary bladder

(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 : 2×4=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)*** 5×3=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 unmyclinated 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
