4 SEM TDC ZOOH (CBCS) C 9

2025

(May/June)

ZOOLOGY

(Core)

Paper : C–9

(Animal Physiology : Life Sustaining Systems)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. (a) Fill in the blanks :   1×5=5

   (i) Loop of Henle is found in _____.

   (ii) Gastric juice is secreted by _____.

   (iii) Deficiency of vitamin A leads to _____.

   (iv) Digestion of protein is completed in _____.

   (v) The disease in which blood fails to clot is _____.

(b) Write short notes on (any *two*) : 4×2=8

   (i) Histology of lung

   (ii) Absorption of lipid

   (iii) Regulation of blood pressure

   (iv) ECG

2. Distinguish between (any *two*) : 4×2=8

   (a) SA node and AV node

   (b) Extrinsic and Intrinsic pathway of blood clotting

   (c) Aerobic and Anaerobic respiration

   (d) Tidal volume and vital capacity

3. Define nephron. Draw a neat labelled diagram of nephron. Where do ultrafiltration, reabsorption and secretion occur in a nephron? 1+4+3=8

Or

Briefly state the functions of nephron in urine formation. Add a note on the mechanism of urine formation. 3+5=8

4. What is cardiac output? Give the structure of cardiac muscle and explain the process of impulse conduction in cardiac muscle. 1+7=8

Or

What is peristalsis? State the role of pepsin in protein digestion. Discuss the absorption of proteins in the alimentary canal. 1+2+5=8

5. Write a brief note on the function of haemoglobin. Describe the ABO and MN blood groups and Rh factor. 2+6=8

Or

What is chloride shift? Write its significance during respiration. Describe oxygen-haemoglobin dissociation curve. 1+2+5=8

6. Describe the cardiac cycle of human heart. Distinguish between systole and diastole. 6+2=8

Or

Name the enzymes for carbohydrate digestion and the substrate they digest and the products of their action. 1½+2½+4=8

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