This question paper contains **4** printed pages]

**Roll No.** | | | | | | | | | | | |

S. No. of Question Paper : **995**

Unique Paper Code : **223401** **E**

Name of the Paper : **Animal Physiology and Functional Histology-II (ZOHT-405)**

Name of the Course : **B.Sc. (Hons.) Zoology**

Semester : **IV**

Duration : **3 Hours** Maximum Marks : **75**

*(Write your Roll No. on the top immediately on receipt of this question paper.)*

Answer *Five* questions in all including

Question No. **1** which is compulsory.

1. (*a*) Define the following : 5

(*i*) Physiological dead space

(*ii*) Auscultation

(*iii*) Cardiac reserve

(*iv*) Hemostasis

(*v*) Haldane effect.

(*b*) Fill in the blanks : 5

(*i*) In the small intestine the digested fat is absorbed in .....

(*ii*) Kupffer cells are preasent in the .....

P.T.O.

(iii) Discharge of urine from the urinary bladder is called .....

(iv) Plasma minus its clotting proteins is termed .....

(v) Oxygen in blood is carried primarily in the form of .....

(c) State whether the following statements are True *or* False : 5

(i) Foetal Hb shifts oxygen dissociation curve to the left.

(ii) The soft palate, uvula and epiglottis prevent swallowed foods and liquids from entering the respiratory passages.

(iii) The pleural membrane is a serous membrane.

(iv) The visceral layer of the serous pericardium (epicardium) is both a part of the pericardium and a part of the heartwall.

(v) A long refractory period prevents tetanus in cardiac muscle fibers.

(d) Expand the following : 4

(i) GFR

(ii) SV

(iii) MMC

(iv) $PCO_2$

(v) ERV

(vi) Va

(vii) AHF

(viii) PTC.

(*e*) Indicate the exact location and function of the following : 8

(*i*) Paneth cells

(*ii*) Dust cells

(*iii*) Pyloric Sphincter

(*iv*) Juxtaglomerular cells.

2. (*a*) Describe the *three* phases of digestion.

(*b*) Discuss in detail the mechanical and chemical digestion in the stomach. 6+6

3. (*a*) Describe in detail the respiratory centers and their role in controlling breathing in man.

(*b*) Describe the histology and function of the respiratory membrane. 9+3

4. (*a*) Describe how the renal tubule and collecting ducts produce dilute and concentrated urine.

(*b*) Trace the path of blood flow through the kidneys. 9+3

5. (*a*) Define cardiac output. Describe the factors that affect the regulation of cardiac output.

(*b*) Draw a labelled diagram of cardiac cycle showing all the events associated with one heartbeat. 6+6

6. (*a*) List all the blood coagulation factors and diagrammatically show the intrinsic pathway of blood coagulation.

(*b*) Describe the structure, function and origin of platelets. 9+3

7. Write short notes on any *three* of the following : 4,4,4

(*a*) Role of Gastrointestinal hormones

(*b*) Blood pressure

(*c*) Oxygen dissociation curve

(*d*) Histology and functions of the liver

(*e*) Carbon monoxide poisoning.