

2020
Gurudas College
ZOOLOGY – HONOURS

Paper: CC- 9

Full Marks: 60

Time: 2 hrs. 30 mins.

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Part A

Answer **any twenty five** questions from the following:

2x25

1. How does bile help in the absorption of long chain fatty acids?
2. What are Peyer's patches?
3. What is the composition of human saliva?
4. What are the 2 important functions of succus entericus?
5. Where is the Sphincter of Oddi and what is its function?
6. Why should you eat fatty food when taking Vit A supplement? By what mechanism is Vit B₁₂ absorbed?
7. Match the following
 - A. Tidal volume
 - B. Inspiratory reserve volume
 - C. Expiratory reserve volume
 - D. Residual volume
 - i. 1200 ml.
 - ii. 500 ml.
 - iii. 3000 ml.
 - iv. 1100 ml
8. In which direction does the O₂ dissociation curve shift with
 - a. Increased pH
 - b. Increased fetal Hb
 - c. Increased blood temperature
 - d. Increased concentration of 2,3 DPG
9. What happens during carbon monoxide poisoning?
10. What is 20 volumes percent in respiration?
11. What is Haldane effect?
12. What is called air conditioning function of the upper respiratory passageways?
13. Write 2 characteristics of coronary circulation.
14. What do you mean by pacemaker of heart?
15. Compare SA node and AV node.
16. Write the molecular basis of blood grouping.
17. What do you mean by Isovolumetric contraction period?
18. How and when is 1st Heart Sound produced?
19. Compare R and T state of hemoglobin
20. Write 2 features of reticulocyte.
21. Name Factor 4 of blood coagulation.
22. What do you mean by stroke volume?
23. Explain Facultative water reabsorption ?
24. What do you mean by effective filtration pressure?
25. Write the full form of TMAO and GFR
26. Write one difference between osmoregulators and osmoconformer Give example
27. What is erythroblastosis foetalis?
28. Name two systems that are related with urine acidification.
29. Mention the differences of osmoregulation in marine elasmobranch and teleosts.,
30. Name one buffer system in acid base regulation, and its site of action
31. Write the full form of RAAS and one of its function.
32. Name any two extrarenal salt eliminating structures.
33. Define Cardiac output.
34. Write the significance of blood group.
35. Name two intravascular anticoagulants.

Part B
Internal Assessment

Choose the correct alternative for *any ten* from the following:

1x10

1. In the tissues, CO₂-dissociation curve
 - A. Shifts to the left
 - B. Shifts to the right
 - C. Remains unchanged
2. Physiological respiration involves
 - A. The mechanisms that ensure that the composition of the functional residual capacity is kept constant
 - B. The mechanism that equilibrates with the gases dissolved in the pulmonary capillary blood, and thus throughout the body
 - C. The movement of O₂ from the outside environment to the cells within tissues
 - D. Transport of CO₂ from within cells to outside environment
 - E. None of the above
 - F. All of the above
 - G. Some of the above
3. Enterocytes are
 - A. Exocrine glands which secrete mucus
 - B. Tall columnar cells, which have an absorptive function
 - C. Cells that secrete protective agents like defensins
 - D. Stem cells that replace those lost by abrasion
4. Digestion of starch follows this pathway
 - A. boiled starch → soluble starch → achrodextrin + maltose → erythrodextrin + maltose → Isomaltose + maltose
 - B. boiled starch → soluble starch → Isomaltose + maltose → erythrodextrin + maltose → achrodextrin + maltose
 - C. boiled starch → soluble starch → erythrodextrin + maltose → achrodextrin + maltose → Isomaltose + maltose
 - D. boiled starch → soluble starch → erythrodextrin + maltose → Isomaltose + maltose → achrodextrin + maltose
5. The taste of umami is thought to signal
 - A. Energy rich food
 - B. Poisonous food
 - C. Salt rich food
 - D. Protein-rich food
6. What is the renal threshold value of glucose in normal individual?
 - A. 200mg/dl
 - B. 250mg/dl
 - C. 150mg/dl
 - D. 180mg/dl
7. Podocytes are present in
 - A. Bowman's Capsule
 - B. Proximal Convoluted Tubule
 - C. Distal Convoluted Tubule
 - D. Henle's Loop
8. Which one of the following is blood coagulation factor IX ?
 - A. Hageman Factor
 - B. Fibrin Stabilizing Factor

- C. Christmas Factor
- D. Proaccelerin

9. Stroke volume is the amount of blood:

- A. pumped out from the ventricle per minute
- B. pumped out into the auricle per minute
- C. pumped out from the ventricle per beat
- D. none of the above

10. Which one the following is not an event in the ventricular diastole

- A. Rapid Ejection Phase
- B. First Rapid Filling Phase
- C. Isovolumic Relaxation Phase
- D. Slow Filling Phase

11. Renal Glutaminase activity is increased in

- A. Metabolic acidosis
- B. Respiratory acid
- C. Both of the above
- D. None of the above

12. Ischaemia associated with intense chest pain is known as:

- A. Angina
- B. Fibrillation
- C. Murmur
- D. Pericardium

13. Duration of diastases is

- A. 0.2sec
- B. 10.04sec
- C. 0.06sec
- D. 0.28sec

14. The left coronary artery supplies mainly:

- A. Right Ventricle and posterior part of the left ventricle
- B. Anterior and left lateral posterior of the left ventricle
- C. Coronary sinus
- D. Thebesian veins

15. Normal value of glomerular filtration rate is

- A. 160mL/min
- B. 180mL/min
- C. 125mL/min
- D. 100mL/min