



Register Number:

Date: 20/10/2019

**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27**  
**B.Sc., ZOOLOGY - III SEMESTER**  
**SEMESTER EXAMINATION: NOVEMBER 2020**  
**ZO 318 -HUMAN ANATOMY AND PHYSIOLOGY I**

Time- 2 1/2 hrs

Max Marks-70

This paper contains 2 printed pages and four parts  
Draw labelled diagrams wherever necessary.

**PART A**

Answer the following:

7 X 1 = 7

1. Secretions of \_\_\_\_\_ gland, help in the nourishment of sperms.
2. Dead space or volume of lungs is around \_\_\_\_\_ ml of air.
3. Expand CCK.
4. \_\_\_\_\_ & \_\_\_\_\_ are the foramen present in the mandible in humans.
5. The shedding of the keratinized cells from the surface of the skin is called as \_\_\_\_\_.
6. Sternum is also called as \_\_\_\_\_.
7. Give the adult dental formula.

**PART B**

Answer the following:

4 X 2 = 8

8. Define RQ. What is the value of it in a carnivore?
9. What is a slip disc?
10. Briefly explain the constituents of the reticular layer of skin.
11. Give the meaning, cause and treatment measure for Obstructive jaundice

**PART C**

Answer any FIVE of the following:

5 X 5 = 25

12. Trace the pathway of the human urethra from spermatic cord till its terminal opening.
13. Draw and describe the structure of an alveolus.
14. a. Draw a neat labelled diagram of the neuromuscular junction. (3m)  
b. Draw and label the thin filament. (2m)
15. Draw and explain the features of humerus bone.
16. a. What role does the juxtaglomerular apparatus play, in excretion? (2m)  
b. Explain the formation of primary urine. (3m)
17. Draw a neat labelled diagram of the conducting system of the human heart.
18. Name the arterial branches of Aorta leading into shoulder & upper limbs.

**PART D**

Answer any **THREE** of the following:

**3 X 10 = 30**

19. a) Draw and explain the structure of an intestinal gland with reference to its secretions. **(8m)**  
b) List any four functions of Liver. **(2m)**
20. a) List out any 4 differences between a cervical and thoracic vertebra. **(4m)**  
b) Describe the structure of innominate bone with a diagram. **(4+2m)**
21. a. Differentiate between the external environment and internal environment **(2m)**  
b. "In a negative feedback mechanism the effector opposes the stimuli". Substantiate with an example with reference to temperature. **(5m)**  
c. How does a goldfish adjust to its environment? **(2m)**
22. Depict the dissociation of oxygen from hemoglobin with the help of a comparative graph under various levels of partial pressure of CO<sub>2</sub>. Which & how does the four factors influence the process?
23. Draw and explain with a neat labelled diagram of the following:
  - a) Thyroid cartilage of the larynx. **(5m)**
  - b) Areas and outline histology of the human uterus and Fallopian tube. **(5m)**

**ZO318-A-20**