

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2022**  
**(Regular/Improvement/Supplementary)**  
**ZOOLOGY**  
**FZOL3C07 - PHYSIOLOGY**

**Time: 3 Hours**

**Maximum Weightage: 30**

**Part A: Answer any *four* questions. Each carries *two* weightage.**

*Write short accounts on:*

1. Functions of lymph.
2. Significance of renal clearance.
3. Functions of respiratory centres in medulla oblongata.
4. Role of pancreas in digestion.
5. Pain receptors.
6. Composition of lymph.
7. Health issues related to obesity.

**(4 × 2 = 8 weightage)**

**Part B: Answer any *four* questions. Each carries *three* weightage.**

8. What are respiratory volumes? How do they differ from respiratory capacities?
9. Discuss the functions of Wernicke's area and Broca's area in language comprehension and speech.
10. With suitable illustrations describe the structure, transduction and neural pathway of olfactory system.
11. Briefly discuss the mechanisms of monosaccharide absorption.
12. How do fetal hemoglobin and myoglobin affect oxygen dissociation curves?
13. Classify memory and outline the mechanisms of each type of memory.
14. Briefly discuss the mechanisms of temperature regulation in man.

**(4 × 3 = 12 weightage)**

**Part C: Answer any *two* questions. Each carries *five* weightage.**

15. Correlate countercurrent mechanism and concentration of urine. Add a note on ADH.
16. Discuss the photochemistry of vision and colour vision.
17. Explain the physiological anatomy of coronary blood flow and its control. Add notes on ischemic heart diseases.
18. Describe the structural components of limbic system and discuss their roles in emotion and motivation.

