

**SUBJECT CODE: 11ZL/MC/VP64**

**B. Sc. DEGREE EXAMINATION APRIL 2017**  
**BRANCH VI.A. - ADVANCED ZOOLOGY & BIOTECHNOLOGY**  
**SIXTH SEMESTER**

**COURSE : MAJOR – CORE**  
**PAPER : VERTEBRATE PHYSIOLOGY**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS: (10 X 3 = 30)**

1. Name the deficiency disease caused by a) Vitamin A b) Vitamin C c) Vitamin B<sub>1</sub>.
2. State any three important functions of bile.
3. Define the following a) Ovulation b) Heart Beat c) Respiratory Quotient.
4. Differentiate between Ammonotelic, Ureotelic and Uricotelic organism.
5. State any three functions of nephrons.
6. Give the composition of lymph.
7. Classify neurons on the basis of their cell processes.
8. Define a) Chloride shift b) Fatigue c) Thrombosis.
9. State the function of the following hormones. a) Oxytocin b) Gastrin c) Vasopressin.
10. Classify sense organs based on the type of stimulus received.

**SECTION – B**

**ANSWER ANY FIVE OF THE QUESTIONS: (5 X 6 = 30)**

11. Draw and describe the structure of the salivary gland. Add a note on the functions of saliva.
12. Explain the working principles and applications of ECG and EEG.
13. Explain reflex action with a suitable diagram.
14. Explain the mechanism of thermoregulation in Poikilotherms and Homeotherms.
15. Define Bioluminescence and enumerate on its functional significance.
16. Comment on the various physiological adaptation to high altitudes.
17. Explain the Physiology of Ageing.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS: (2 X 20 = 40)**

18. Describe the mechanism of osmoregulation exhibited by vertebrates in the freshwater and marine environments.
19. Give an account of digestion and absorption of Carbohydrates and Proteins.
20. With a neat diagram explain the ultra-structure of the striated muscles. Add a note on the theories of muscle contraction.
21. Write an essay on the structure, function and regulation of Thyroid and Pancreas of man.

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