

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
**(For candidates admitted during the academic year 2008 - 2009)**

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

**B. Sc. DEGREE EXAMINATION APRIL 2011**  
**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. Mention the role of bile in digestion?
2. Draw a neat labeled diagram of the reflex arc.
3. Bring out the differences between striated and unstriated muscle.
4. Define BMR and list the factors on which it depends on.
5. Highlight the difference between diabetes mellitus and diabetes insipidus.
6. What is night blindness?
7. Write notes on pacemakers of the heart.
8. Briefly explain the phenomenon of bioluminescence.
9. Comment on the hormones that regulate urine formation.
10. Expand and define ECG and EEG.

**SECTION – B**

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

11. Describe glomerular filtration with a suitable diagram.
12. Draw a neat labeled diagram of the structure of the mammalian eye and discuss the role of the retina.
13. Comment on the functions of proteins in muscle contraction.
14. How is oxygen transported in the blood?
15. Discuss the different types of nitrogenous end products excreted by the vertebrates .
16. Explain the structure and function of the adrenal gland.
17. What is lymph? Give its importance.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS:**

**(2 X 20 = 40)**

18. Give a detailed account of digestion, absorption and utilization of fats with suitable illustrations.
19. What are the osmoregulatory mechanisms in vertebrates?
20. Draw and describe the structure of the human heart and physiology of circulation. Briefly explain the human cardiac cycle and heart sounds.
21. With suitable illustrations write an essay on conduction of nerve impulse and discuss neuromuscular junction in brief.

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