 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION - **ZOOLOGY**

THIRD SEMESTER – APRIL 2011

# ZO 3810/3807 - INTEGRATED PHYSIOLOGY

Date : 12-04-2011 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

**PART - A ( 10 x2=20)**

**ANSWER ALL IN A FEW SENTENCES**

1. Distinguish psychophiles and halophiles.

2. Differentiate hiberation and diapauses.

3. Define cyclomorphosis.

4. State diffusion coefficient.

5. What do you know about Juxtra glomerular complex ?

6. Comment an Warburg’s yellow enzyme.

7. What are chaperones and chromataphores?

8. State the importance of lipofusin.

9. Comment an Calmodulation.

10. Expand: a) CCK b) BMR

**PART – B ( 4 x 10 = 40)**

**BRIEFLY ANSWER ANY FOUR**

11. Compare the osmoregulatory mechanisms of aquatic and terrestrial animals.

12. Explain the mechanisms of G- protein signaling.

13. Elucidate positive and negative feedback mechanisms using hormones.

14. Illustrate Wald’s visual cycle with a note on its significance.

15. How is stomach acid secretion regulated in our digestive system ?

16 . Outline the role of buffer system in the physiological co-ordination.

. **PART – C ( 2 x20=40)**

**ANSWER ANY TWO IN DETAIL**

17. Discuss the physiology of muscular contraction including cardiac muscular contraction.

18. Examine the concept of chronobiology towards its implication.

19. Decipher the mechanisms of thermoregulation in the light of endocrine

System.

20. Compare the physiology of electric organs and organs involved in bioluminescence.

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