



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION - ZOOLOGY

THIRD SEMESTER – APRIL 2013

ZO 3810 - INTEGRATED PHYSIOLOGY

Date : 04/05/2013

Dept. No.

Max. : 100 Marks

Time : 1:00 - 4:00

SECTION – A

Answer ALL questions

(10×2= 20)

01. What is unique about halophytes ?
02. What do you know about X-organ sinus gland complex ?.
03. Distinguish depolarization and repolarization
04. Define cryptobiosis.
05. State Poiseuille's law
06. Mention any two applications of bioluminescence
07. What are neurotransmitters ? Cite two examples.
08. Compare upregulation and down regulation
09. Depict the structure of aldosterone
10. Expand: a) SCN and b) JGA

SECTION – B

Answer any FOUR questions briefly

(4×10= 40)

11. Examine all the cranial nerves of human with respect to functions.
12. Highlight the neuro endocrine physiology of insects.
13. Outline the effects of any ten toxins on human physiology.
14. How do you estimate BMR ?.
15. Compare the osmoregulatory mechanism of invertebrates and vertebrates
16. What are the factors governing oxygen dissociation curve ?

SECTION – C

Answer any TWO questions in detail

(2×20= 40)

17. Discuss the scope of *chronobiology* in terms of circadian rhythms and Hypothalamic function.
18. Decipher the neuronal and hormonal homeostasis in human
19. Compare physiology of muscle contraction in cardiac muscles and skeletal muscles.
20. Elucidate the electroneuro physiology of vision in view of pigments and phototransduction .
