

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

SECOND YEAR [2016-19]

B.A./B.Sc. THIRD SEMESTER (July – December) 2017

Mid-Semester Examination, September 2017

Date : 15/09/2017

ZOOLOGY (General)

Time : 12 noon – 1 pm

Paper : III

Full Marks : 25

1. Answer **any five** questions : [5×2]
 - a) What are Eicosanoids & Pituicytes?
 - b) Draw the hypothalamus-hypophyseal-thyroid axis (word diagram).
 - c) Define Proopiomelanocortin (POMC).
 - d) What is action potential?
 - e) What is meant by 'Trophic Level' in an ecosystem?
 - f) Distinguish between NPP & GPP.
 - g) What is population density? Define Weismann's ring. [1+1]
 - h) Define euryhaline organisms with an example.
 - i) Mention the composition of blood plasma.

2. Answer **any three** questions : [3×5]
 - a) Differentiate between Acidophils and Basophils found in adenohypophysis. Briefly describe the histology of pancreatic acini. [2+3]
 - b) Briefly explain how Thyroxin is synthesized in follicular cells? What is the importance of "threshold potential" on voltage gated sodium and potassium channels? [2·5+2·5]
 - c) Explain the different phases and molecular mechanism behind synaptic transmission (chemical) between two neurons. [5]
 - d) Distinguish between crude natality rate & specific natality rate with an example. Mention the importance of a survivorship curve. What is ammonification? [2+2+1]
 - e) Illustrate the differences between r-selected & k-selected species. [5]
 - f) Name different components of the endocrine system in an insect. What are juvenoids? State its function. Give an example of insect juvenoid. [2+1+1+1]
 - g) What is Haemostasis? Describe the pathway of vascular-thrombocytes haemostasis with a flowchart. [1+4]