

# RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

FIRST YEAR [2018-21]

B.A. /B.Sc. SECOND SEMESTER (January – June) 2019

Mid-Semester Examination, March 2019

Date : 27/03/2019

ZOOLOGY (General)

Time : 11am – 12noon

Paper: II

Full Marks: 25

1. Answer **any five** questions of the following: [5 × 2]
  - a) What is yolk nucleus?
  - b) What is manchette?
  - c) Compare between radial and spiral cleavage.
  - d) Define down feather.
  - e) What is double respiration?
  - f) Differentiate primary and secondary gill bars of Branchiostoma.
  - g) Distinguish between scales of fish and reptile.
  - h) What is head kidney?
2. Answer **any two** questions of the following: [2 × 2.5]
  - a) Enumerate the role of sertoli cells in spermatogenesis.
  - b) Mention the steps of gametogenesis.
  - c) Write a short note on 'structure of Placoid scale'.
  - d) State the differences between homocercal & heterocercal tails in fishes.
  - e) Mention major characteristic features of sub class 'Actinopterygii'.
3. Answer **any two** questions of the following: [2 × 5]
  - a) Name the accessory coats of chick eggs. How sea urchin sperms are hyperactivated and attracted towards its ova? [2+3]
  - b) Write down the structure of flight feather with suitable diagram.
  - c) Draw a labelled diagram of stomach of *Columba*. Mention its role in digestion. [3+2]
  - d) State the important adaptive features of an amphibian skeleton. Enumerate characteristic features of the order Salientia with suitable examples. [2+3]
  - e) In which order do salamanders belong? 'Caecilian body is ideal for fossorial (burrowing) adaptation' – justify. [1+4]

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