

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. SECOND SEMESTER EXAMINATION, JUNE 2022

FIRST YEAR [BATCH 2021-24]

ZOOLOGY (HONOURS)

Paper : III [CC3]

Date : 20/06/2022

Time : 11 am – 1 pm

Full Marks : 50

Answer **any five** questions:

[5×2]

1. a) What is ASVS?
b) Describe filoplume.
c) What is carnassials teeth? Where is it found?
d) What is venous heart?
e) Compare the aortic arches in birds with the aortic arches in mammals.
f) What are Capula and Kinocilium?
g) What are head kidney and nephrostome?
h) What is melon. Mention its significance.

Answer **any four** questions:

[4×10]

2. a) “In *Ascidia*, adopting sessile nature by adult is advantageous than the life of a motile larva” – justify.
b) Mention two important features of Tornaria larva, which are similar to an echinoderm larva.
c) What are the identifying characters of the order Falconiformes?
d) How do the hydrodynamic stimuli facilitate a fish to sustain in aquatic environment? [3+2+3+2]
3. a) Compare horn and antlers with a suitable diagram.
b) What is prong horn?
c) What is diastema?
d) Define thecodont, bunodont and selenodont. [4+1.5+1.5+3]
4. a) Illustrate the structure of remiges with a labelled diagram.
b) Differentiate venomous and non-venomous snakes. State the role of digastric muscle in biting of snake. [(4+2)+(3+1)]
5. a) State the differences between Chondrichthyes and Osteichthyes.
b) Give a comparative account of structure of heart of *Bufo sp.* and *Cavia sp.* [5+5]
6. a) Name the ARO found in *Periophthalmus*.
b) Mention the causes of origin of ARO.
c) Define holobranch and hemibranch gills.
d) Describe the ARO of *Heteropneustes* with a suitable diagram. [1+2+3+4]

7. a) Differentiate between mesonephric and metanephric kidneys in vertebrates.
b) Mention three potential adaptive features present in bat for echolocation.
c) What is CF and QCF FM frequency in bat echolocation call?
d) Why cow's ruminant stomach is known an optimum bacterial starter culture? [2+3+2+3]
8. a) Mention the significance of Mullerian duct in fish and avian kidneys.
b) Define 'chewing of cud' and 'belching'.
c) How does an echolocating bat discriminate call of its own from other?
d) Mention the function of honey comb, omasum and abomasum of cow's ruminant stomach. [3+2+2+3]

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