

3 Yr. Degree/4 Yr. Honours 2nd Semester Examination, 2024 (CCFUP)

Subject : Zoology

Course : ZOOL2011 (MAJOR)

(Chordates)

Time: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group-A

1. Answer any five questions from the following:

2×5=10

- (a) Write two unique characteristics of Class Cephalaspidomorphi.
- (b) Write two morphological differences between poisonous and non-poisonous snakes.
- (c) Write four cardinal characteristics of chordates.
- (d) Distinguish between horn and antler.
- (e) Write the scientific names of the salamander and an apodan amphibian found in India.
- (f) Differentiate between remiges and retrices.
- (g) Differentiate between "osmoregulators" and "osmoconformers".
- (h) Where do you find endostyle? Mention its function.

Group-B

2. Answer any two questions from the following:

5×2=10

- (a) What do you understand by "retrogressive metamorphosis"? In which organism is it seen? Justify why the process is "retrogressive". 1+1+3
- (b) Specify two key features by which Prototheria differs from Theria. Write down the affinities of prototheria with birds. 2+3
- (c) Why parental care has evolved in some fish species? Describe briefly any two types of parental care behaviour among fishes with examples. 1+4
- (d) Why amphibians are known as anamniotes? Discuss the key morphological and physiological changes observed in anuran tadpole during metamorphosis. 1+4

3. Answer any two questions from the following:

10×2=20

- (a) "*Chelone*, *Naja* and *Alligator* are included in same class but in different subclasses"—Justify with proper illustrations. What do you mean by Vomeronasal organ? 9+1
- (b) What is the difference between plantigrade and digitigrade locomotion? Enumerate various adaptations of locomotory structures in cursorial mammals. Describe the morphological modifications in microchiropteran bats in relation to echolocation. 1+3+6
- (c) Mention the names of six zoogeographical realms. Add notes on distribution of birds and mammals in Oriental and Australian realms. 2+(4+4)
- (d) Elaborate the role of Bernouli's principle in flight mechanism of birds. Specify the external cues and internal physiological events that trigger migration in birds. 5+5
