

Model Question

Tribhuvan University

Bachelor Level (4 Yrs) Sc. & Tech.

Full Marks: 100

Course Title: Chordata, Comparative Anatomy and Evolution

Pass Marks: 35

Course No. : B. Sc. Zool. 201

Year: II

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Illustrate your answers with suitable diagrams wherever necessary.

Group A

Attempt any two questions

2x10=20

1. Describe various morphological features used in fish identification.
2. Give an account on adaptive radiation in mammalia.
3. What is learning behavior? Describe different types of learning behavior in animals with examples.

Group B

Attempt any two questions

2x10=20

4. What is integument? Give comparative account of integument of birds and mammals.
5. Give a comparative account of hearts in vertebrates.
6. What is isolation? Describe various types of isolating mechanisms.

Group C

Attempt any eight questions

8x5=40

7. Describe different types of scales found in fishes.
8. Discuss axolotl and neoteny.
9. Trace the ancestry of reptiles.
10. Differentiate between dromaeognathous and schizognathous types of palate.
11. Give an account of the distinguishing characters of mammal.
12. Compare the pectoral girdles of amphibian with that of bird.
13. Write notes on (i) archinephros and (ii) metanephros
14. Justify the statement that 'Birds are glorified reptiles'.
15. Describe the concept of vicariance.
16. Explain briefly equilibrium theory of Island biogeography.

17. Give very short answers of any eight

8 x 2.5=20

- (i) Notochord in agnatha
- (ii) Affinities of *Sphenodon*
- (iii) Air-sacs
- (iv) Structure of mammalian brain
- (v) Means of communication in animal
- (vi) Craniostylic suspension
- (vii) Ruminant stomach
- (viii) Renal portal system
- (ix) Hardy-Weinberg Law
- (x) Cosmopolitan and endemic distribution of fauna