

Term End External Examination 4th Semester (Session- July 2024)

Subject: Zoology

Course No and Title: ZOLC2422M/ Comparative Anatomy of Vertebrates

Time: 2.15 hours

Max Marks:100

Min. Marks:40

Section A: Objective Type Questions

Q1. Choose the appropriate Answer: (8x1.5=12)

- i. Which vertebrate group typically lacks scales in their integument?
A Fish B Birds
C Amphibians D Mammals
- ii. Which vertebrate group has integument modified into feathers for flight and insulation?
A Reptiles B Birds
C Amphibians D Mammals
- iii. The hindbrain in vertebrates includes the:
A Cerebellum B Medulla oblongata
C Hypothalamus D Both A & B
- iv. The jaw suspension in mammals is typically
A Hyostylic B Autostylic
C Amphistylic D Holostylic
- v. The first visceral arch in vertebrates forms which structures?
A The jaws B The hyoid apparatus
C The gill arches D The larynx
- vi. Which type of kidney is present in adult reptiles, birds, and mammals?
A Pronephros B Mesonephros
C Metanephros D Opisthonephros
- vii. How many aortic arches are typically present during the embryonic development of vertebrates?
A 3 B 4
C 5 D 6

viii. What is the primary respiratory organ in fishes?

- A Lungs B Gills
C Tracheae D Book lungs

SECTION-B: DESCRIPTIVE TYPE QUESTIONS (Short Type)

Q2: Answer all the Questions (8 x 4 =32)

- i. Differentiate between the True horns and antlers?
- ii. What are down feathers?
- iii. What do you mean by archinephric and metanephric kidney?
- iv. What is Jacobson's organ?
- v. Write the location and function of preen glands in birds?
- vi. Difference between Larynx and Syrinx?
- vii. What are Cranial nerves? Name all the cranial nerves in fishes?
- viii. What is the function of statocyst?

Section – C: Descriptive Type Questions (Medium Type)

Answer all the questions: (4 x 7=28)

- Q3. Give a brief account of structure and types of scales found in fishes?

OR

Write briefly about the integumentary derivatives in birds?

- Q4. Describe the types of Centrum in vertebrates?

OR

Write in brief the comparative account of Pectoral girdle in Birds and mammals?

Q5. Write a note on the structure and function of Gills?

OR

Give a brief account of Visceral arches in vertebrates?

Q6. Write a brief account on the evolution of kidneys in vertebrates?

OR

Compare the Aortic arches in fishes, amphibians and mammals with labeled diagrams?

Section – D: Descriptive Type Questions (Long Type)

Answer any two of the following: (2 x 14=28)

Q7. Explain in detail the structure and types of feathers?

Q8. Describe the comparative anatomy of brain in vertebrates?

Q9. What is jaw suspension and write a comparative account of jaw suspension in vertebrates?

Q10. Give a detailed account of evolution of heart in vertebrates?