**TDC (CBCS) Even Semester Exam., 2023**

# ZOOLOGY

## ( Honours )

**( 4th Semester )**

Course No. : ZOOHCC–401T

**( Comparative Anatomy of Vertebrates )**

*Full Marks* : 50
*Pass Marks* : 20

*Time* : 3 hours

*The figures in the margin indicate full marks for the questions*

## SECTION—A

Answer any *ten* of the following questions : 2×10=20

**1.** Define epidermal glands with example.

**2.** Enumerate the functions of endoskeleton.

**3.** What are visceral arches? What are the functions of visceral arches?

4. Why is pancreas considered as heterocrine gland in mammals? Write the exact location of pancreas in mammal.

5. Name the main respiratory organ in amphibians. What are the different modes of respiration found in amphibians?

6. What are accessory respiratory organs? Mention their functions in fishes.

7. Define blood vascular system. What do you understand by 'closed circulatory system'?

8. What are metanephric kidneys? In which animal do you get metanephric kidneys?

9. Name the different kinds of uteri found in eutherian mammals.

10. What are the main parts of brain in mammals?

11. Define autonomic nervous system.

12. Differentiate between corpus callosum and corpus striatum.



( Continued )



13. What are receptors? Name two cutaneous receptors in vertebrates.

14. What is lacrimal gland? In which animals do you get this gland?

15. Define chemoreceptors with example.

## SECTION—B

Answer any *five* of the following questions : 6×5=30

16. What is integument? Discuss the different integumentary derivatives in vertebrates. 1+5=6

17. What do you understand by axial skeleton? Compare the skull of a reptile with that of a bird. 1+5=6

18. Name the main respiratory organs in birds. Discuss briefly the respiratory mechanism in birds. 2+4=6

19. Write short notes on any *two* of the following : 3×2=6

    *(a)* Air sacs in birds

    *(b)* Respiratory tract in birds

    *(c)* Digestive glands in mammals



( Turn Over )

**20.** Describe the evolution of heart in vertebrates with proper illustration.

**21.** Describe the evolution of genital ducts in different vertebrates.

**22.** Give a comparative account of the brain of reptile and mammal.

**23.** Write short notes on the following : 3×2=6

*(a)* Spinal cord in mammal

*(b)* Cranial nerves in mammal

**24.** Describe the structure of internal ear in human with illustration.

**25.** Write short notes on any *two* of the following : 3×2=6

*(a)* Mechanoreceptors

*(b)* Lateral line system in fishes

*(c)* Olfactory organs in vertebrates

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