

**2024/TDC (CBCS)/EVEN/SEM/
ZOODSC/GEC-201T/016**

TDC (CBCS) Even Semester Exam., 2024

ZOOLOGY

(2nd Semester)

Course No. : ZOODSC/GEC-201T

**(Comparative Anatomy and Developmental
Biology of Vertebrates)**

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

UNIT—1

1. Answer any *three* of the following questions :

1×3=3

- (a) Define integument.
- (b) What is Meckel's cartilage?
- (c) Mention different layers present in integument.

(2)

- (d) What do you understand by visceral arches?
2. Answer any *one* of the following questions : 2
- (a) Mention the functions of integument.
- (b) What are the different forms of digital tips found in vertebrates?
3. Answer any *one* of the following questions : 5
- (a) Discuss about various types of glands present in vertebrates.
- (b) Describe briefly evolution of visceral arches in vertebrates.

UNIT—2

4. Answer any *three* of the following questions : 1×3=3
- (a) What is crypts of 'Lieberkuhn'?
- (b) Mention the function of gallbladder.
- (c) What is the function of gizzard?
- (d) What are alveoli?
5. Answer any *one* of the following questions : 2
- (a) What are the functions of air sacs in birds?

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(Continued)

(3)

- (b) What is Labyrinthine organ? Mention its functions.
6. Answer any *one* of the following questions : 5
- (a) Describe the regions of alimentary canal of mammal.
- (b) Write a short note on structure and functions of gills in fishes.

UNIT—3

7. Answer any *three* of the following questions : 1×3=3
- (a) What are aortic arches?
- (b) What is conus arteriosus?
- (c) What is meant by double circulation?
- (d) What are the different types of kidneys found in vertebrates?
8. Answer any *one* of the following questions : 2
- (a) How is polyspermy prevented?
- (b) What are the different types of uterus found in mammal?

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(Turn Over)

(4)

9. Answer any *one* of the following questions : 5

- (a) Write a note on evolution of male urinogenital ducts in vertebrates.
- (b) Give a comparative account of heart of birds and mammal.

UNIT—4

10. Answer any *three* of the following questions :

1×3=3

- (a) What is glial cell?
- (b) What do you mean by 'nodes of Ranvier'?
- (c) What is Jacobson's organ?
- (d) What are the two divisions of nervous system?

11. Answer any *one* of the following questions : 2

- (a) In which division of brain medulla oblongata is situated? Mention its function.

(5)

- (b) What are the functions of gustatory organs in vertebrates?

12. Answer any *one* of the following questions : 5

- (a) Give a comparative account of brain in reptiles and birds.
- (b) Discuss the functions of hypothalamus in detail.

UNIT—5

13. Answer any *three* of the following questions :

1×3=3

- (a) What is Amphimixis?
- (b) What is a fate map?
- (c) Name the hormones secreted by placenta.
- (d) What is morulla?

14. Answer any *one* of the following questions : 2

- (a) Write the important functions of placenta.
- (b) Write a short note on holoblastic cleavage.

(6)

15. Answer any *one* of the following questions : 5

- (a) Describe the process of spermatogenesis in mammal with diagram.
- (b) Write briefly about various events of fertilization with suitable illustrations.

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