

**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?

( 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?

( 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.

24J/653

( Continued )

( 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.

24J/653

( Turn Over )

**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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