

2024/TDC (CBCS)/EVEN/SEM/  
ZOOHCC-402T/018

TDC (CBCS) Even Semester Exam., 2024

ZOOLOGY

( 4th Semester )

Course No. : ZOOHCC-402T

( Physiology : Life Sustaining System )

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 *two* of the following questions :

2×2=4

(a) What do you mean by diphyodont teeth?  
Mention the dental formula of  
permanent teeth of human. 1+1=2

(b) Name the enzymes secreted by the  
intestine.

(c) Mention the role of saliva in digestion.

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( Turn Over )



( 2 )

2. (a) Describe the mechanism of chemical digestion of carbohydrates in mammal. 6

Or

- (b) Discuss the role of various hormones associated with digestion in mammal. Name the fat emulsifying agent in digestion. 5+1=6

UNIT—2

3. Answer any *two* of the following questions :

2×2=4

- (a) Write a brief note on pulmonary ventilation.
- (b) What do you mean by oxygen-hemoglobin dissociation curve? Mention two factors affecting the curve.
- (c) Write a short note on respiratory centres present in human.

4. (a) Discuss the histological structure of human lung with suitable diagram. 6

Or

- (b) Define vital capacity and total lung capacity. Discuss briefly the process of oxygen transport. Add a note on carbon monoxide poisoning. 2+2+2=6

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( Continued )

( 3 )

UNIT—3

5. Answer any *two* of the following questions :

2×2=4

- (a) Briefly discuss various functions of kidney.
- (b) What is juxtamedullary apparatus?
- (c) How is acid-base homeostasis maintained in mammal?

6. (a) Discuss the structure of mammalian kidney with suitable diagram. 6

Or

- (b) Describe the process of urine formation in mammal with suitable illustrations.

UNIT—4

7. Answer any *two* of the following questions :

2×2=4

- (a) Write a brief note on the structure of hemoglobin.
- (b) Write a note on haemostasis.
- (c) Mention the functions of agranulocytes present in mammalian blood.

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( Turn Over )

( 4 )

8. (a) Discuss the different components of mammalian blood with necessary diagrams. 6

Or

- (b) What is hematopoiesis? Describe the intrinsic pathway of blood coagulation. 1+5=6

UNIT—5

9. Answer any *two* of the following questions : 2×2=4

- (a) What is coronary circulation?  
(b) Write a short note on cardiac cycle.  
(c) Write a short note on electrocardiogram.

10. (a) Describe the structure of mammalian heart with a suitable diagram. 6

Or

- (b) Describe circulation of blood through the heart of mammal with special emphasis on origin and conduction of cardiac impulses.

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