

**2024/TDC (CBCS)/EVEN/SEM/  
BTCHCC-201T/001**

**TDC (CBCS) Even Semester Exam., 2024**

**BIOTECHNOLOGY**

**( 2nd Semester )**

Course No. : BTCHCC-201T

**( Mammalian Physiology )**

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

**UNIT—I**

1. Answer any two of the following questions :  $2 \times 2 = 4$ 
  - (a) Define digestion.
  - (b) Write the composition of bile.
  - (c) Write about digestion of nucleic acids.
2. Answer any one of the following questions : 6
  - (a) Give a detailed account of mechanism of digestion of proteins.
  - (b) Write about composition of pancreatic, gastric and intestinal juice.

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UNIT—II

3. Answer any *two* of the following questions :  $2 \times 2 = 4$

- (a) What is chloride shift?
- (b) Write a note on transport of  $\text{CO}_2$  through blood.
- (c) Differentiate between aerobic and anaerobic respiration.

4. Answer any *one* of the following questions : 6

- (a) Give a detailed account of exchange of gases.
- (b) Give an illustrated account of transport of oxygen through blood. Draw oxygen dissociation curve.  $4+2=6$

UNIT—III

5. Answer any *two* of the following questions :  $2 \times 2 = 4$

- (a) Differentiate between WBC and RBC.
- (b) Write a note on plasma proteins.
- (c) What is haemopoiesis?

6. Answer any *one* of the following questions : 6

- (a) Write about cardiac output and cardiac cycle.  $3+3=6$
- (b) Give a detailed account of mechanism of coagulation of blood.

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UNIT—IV

7. Answer any *two* of the following questions :  $2 \times 2 = 4$

- (a) Write a note on All or None rule.
- (b) Define isotonic and isometric contraction.
- (c) Write about glomerular ultrafiltration.

8. Answer any *one* of the following questions : 6

- (a) Give an account of cardiac, smooth and skeletal muscle.  $2+2+2=6$
- (b) Write an essay on ornithine cycle.

UNIT—V

9. Answer any *two* of the following questions :  $2 \times 2 = 4$

- (a) What is saltatory conduction?
- (b) Write a note on structure of synapse.
- (c) Give a brief account of thymus.

10. Answer any *one* of the following questions : 6

- (a) Describe the hormones of pituitary gland and their functions.
- (b) Give a detailed account of neuro-transmitters.

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