

**2 0 1 8**

( Pre-CBCS )

( 5th Semester )

**ZOOLOGY**

SIXTH PAPER

**( Animal Physiology )**

*Full Marks : 55*

*Time : 2½ hours*

**( PART : A—OBJECTIVE )**

( *Marks : 20* )

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

Answer **all** questions

SECTION—A

( *Marks : 5* )

Tick (✓) the correct answer in the brackets provided :

1×5=5

**1.** Most digestive enzymes are

(a) hydrolases ( )

(b) transferases ( )

(c) mutases ( )

(d) oxidoreductases ( )

2. Which of the following is called the pacemaker of the heart?
- (a) AV node ( )
  - (b) bundle of His ( )
  - (c) Purkinje fibre ( )
  - (d) SA node ( )
3. Artificial kidney machine can cleanse the blood through the process of
- (a) osmosis ( )
  - (b) dialysis ( )
  - (c) plasmolysis ( )
  - (d) haemolysis ( )
4. During skeletal muscle contraction, there is shortening of
- (a) actin filaments ( )
  - (b) A-band ( )
  - (c) myosin ( )
  - (d) sarcomere ( )
5. A neuron generally has all the following principal areas, *except*
- (a) microvilli ( )
  - (b) a cell body ( )
  - (c) dendrites ( )
  - (d) an axon ( )

SECTION—B

( Marks : 15 )

Write short notes on the following :

3×5=15

1. Cutaneous respiration
2. Blood coagulation
3. Osmoregulation
4. Muscle fatigue
5. Resting potential

**( PART : B—DESCRIPTIVE )**

( Marks : 35 )

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

1. What do you understand by intracellular digestion? Describe the mechanism of protein digestion with suitable schematic representation. 2+5=7

**OR**

Define external respiration. Give an account of lung respiration. 2+5=7

2. Write notes on the following : 3½+3½=7

(a) Closed circulation

(b) Pacemaker

**OR**

Describe the structure and functions of haemoglobin. 7

3. Describe the physiology of urine formation. 7

**OR**

Write notes on the different types of nitrogenous wastes. 7

4. Define striated muscles. Write an account on the muscle proteins. 7

**OR**

Describe the mechanism of muscle contraction. 7

5. What are neurons? Describe the propagation of nerve impulse along non-myelinated nerve fibre. 2+5=7

**OR**

What are the major neurotransmitters? Discuss in detail the structure of a synapse with suitable diagram. 2+5=7

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