2023/06

SET B

B.Sc. BIOTECHNOLOGY
SECOND SEMESTER
MAMMALIAN PHYSIOLOGY
BBT-201

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

(Objective)

Time: 30 mins. **Marks: 20**

Choose the correct answer from the following: ***1×20=20***

1. Ascent of high mountains may cause altitude sickness in men. What is the main cause of this?
   a. Excess of CO_2 in blood
   b. Decreased efficiency of haemoglobin
   c. Decreased partial pressure of oxygen
   d. Decreased proportion of oxygen in the air
2. Mark the one, which is NOT the precursor of the hormone.
   a. Amino acids
   b. Cholesterol
   c. Phospholipids
   d. Proteins
3. Serum is:
   a. Blood minus fibrinogen
   b. Lymph minus corpuscle
   c. Lymph
   d. Blood minus corpuscle and fibrinogen
4. Arterial blood is present in:
   a. Pulmonary arteries
   b. Pulmonary veins
   c. All the arteries
   d. All the veins
5. Carbonic anhydrase is found in:
   a. Leukocyte
   b. Lymphocyte
   c. Blood plasma
   d. Erythrocyte
6. Which of the following is the structural unit of nervous system?
   a. Alveoli
   b. Nephron
   c. Neuron
   d. Leukocyte
7. Inferior venacava is formed by uniting the veins of:
   a. Legs
   b. Trunk
   c. a and b
   d. Neck
8. Is the location where the majority of nutrients are absorbed:
   a. Jejunum
   b. Large intestines
   c. Bronchi
   d. Trachea
9. Which term describes the space between a neuron and its target cell?
   a. Post synaptic membrane
   b. Synaptic cleft
   c. Denridic spine
   d. Axon terminal
10. How many major types of blood have scientists discovered?
    a. One: Type "O"
    b. Two: white cells and red cells
    c. Three: white cells, red cells, and plasma
    d. Four: Types A, B, AB, and O

11. What causes oxygen to move through the alveolar blood capillaries of the lungs?
    a. Difference in the O_2 tension and partial pressure of these chambers
    b. Partial pressure of CO_2
    c. Union of O_2 with haemoglobin
    d. All of the above

12. Which of the following is NOT an endocrine gland?
    a. Hypothalamus
    b. Pituitary
    c. Parathyroid
    d. Pancreas

13. In humans, ...is the difference between systolic and diastolic pressure.
    a. 40 mm Hg
    b. 20 mm Hg
    c. 0 mm Hg
    d. None of the above

14. Which one is not a WBC?
    a. Lymphocyte
    b. Thrombocyte
    c. Monocyte
    d. Basophil

15. Respiration in man is helped by:
    a. Intercostal muscle
    b. Pelvic girdle
    c. Biceps muscle
    d. None of these

16. Name the hormone which takes part in the release of FSH and LH from the anterior pituitary.
    a. Growth hormone
    b. GnRH
    c. Somatostatin
    d. TRH

17. Excitation contraction coupling involves all the following except:
    a. Release of Ca++ from troponin
    b. Formation of cross bridges between actin and myosin
    c. Spread of depolarization along the transverse tubules
    d. Hydrolysis of ATP to ADP

18. The blood vessels that supply blood to the walls of the heart are called:
    a. Coronary arteries
    b. Coronary veins
    c. Duodenum
    d. Ileum

19. In the body, both the blood sodium and potassium levels are regulated by:
    a. Pheromones
    b. Aldosterone
    c. Cortisol
    d. Androgens

20. The endocrine gland which contributes to setting the body's biological clock is:
    a. Pituitary gland
    b. Thymus gland
    c. Pineal gland
    d. Thyroid gland

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Descriptive

Time : 2 hr. 30 mins. **Marks : 50**

[Answer question no.1 & any four (4) from the rest]

1.	Describe the function of blood in detail.	10
2.	Explain briefly the mechanism of muscle contraction in detail.	10
3.	Explain the anatomy of human heart. Write the process of circulation of blood in heart.	4+6=10
4.	Write a short note on: a) Threshold stimulus b) All and none rule	5+5=10
5.	What are neurotransmitters? Explain in brief with examples. Explain briefly the synaptic mode of transmission.	5+5=10
6.	Explain the mechanism of formation of urine in detail.	10
7.	Explain the chloride shift in detail.	10
8.	Write a brief note on the manifestation of hyper and hypo secretion of (a) Thyroid (b) Adrenal gland.	5+5=10

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