

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

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks: 70

**( PART-A : Objective )**

Time : 20 min.

Marks : 20

**Choose the correct answer from the following:**

**1X20=20**

1. If pancreas is removed the compound which remains undigested is?
  - a. Proteins
  - b. Carbohydrates
  - c. Fats
  - d. All these
2. What is common among amylase, rennin and trypsin?
  - a. These are produced in stomach
  - b. These act at a p H lower than 7
  - c. These are all proteins
  - d. These are all proteolytic enzymes
3. Most of the fat digestion occurs at
  - a. Rectum
  - b. Stomach
  - c. Deodenum
  - d. Small intestine
4. Epithelial cells of the intestine involved in the food absorption have on their surface
  - a. Pinocytic vessel
  - b. Zymogen granules
  - c. Phagocytic vesicles
  - d. Microvilli
5. Left auricle receives blood from
  - a. Right auricle
  - b. Lungs
  - c. Right ventricle
  - d. Left ventricle
6. A rise in the blood cholesterol may lead to a deposition of cholesterol on the walls of blood vessels. This causes the arteries to lose their elasticity and get stiffened. This is called
  - a. Hypertension
  - b. Hypotension
  - c. Arterioscheloresis
  - d. Systolic pressure
7. Site of gaseous exchange of gases
  - a. Tracheoles
  - b. Alveoli
  - c. Bronchioles
  - d. Pulmonary chamber
8. Arterial blood is present in
  - a. Pulmonary arteries
  - b. Pulmonary veins
  - c. All the arteries
  - d. All the veins
9. Respiration in man is helped by
  - a. Intercostal muscle
  - b. Pelvic girdle
  - c. Biceps muscle
  - d. None of these
10. Carbonic anhydrase is found in
  - a. Leukocyte
  - b. Lymphocyte
  - c. Blood plasma
  - d. Erythrocyte

11. Which of the following controls the involuntary actions?
  - a. Circulatory system
  - b. Autonomic nervous system
  - c. Excretory system
  - d. Respiratory system
12. Which of the following is the structural unit of nervous system?
  - a. Alveoli
  - b. Nephron
  - c. Neuron
  - d. Leukocyte
13. The amount of water excreted in urine is
  - a. 1.5L
  - b. 2.5L
  - c. 3.5L
  - d. 4.5L
14. Inferior venacava is formed by uniting the veins of
  - a. legs
  - b. trunk
  - c. a and b
  - d. neck
15. The blood vessels that supply blood to the walls of the heart are called
  - a. Coronary arteries
  - b. Coronary veins
  - c. Aorta
  - d. Superior venacava
16. Which of the following prevents fluids and food from entering larynx?
  - a. Epiglottis
  - b. Pharynx
  - c. Bronchi
  - d. Trachea
17. In the body, both the blood sodium and potassium levels are regulated by
  - a. Pheromones
  - b. Aldosterone
  - c. Cortisol
  - d. Androgens
18. Islets of langerhans are found in
  - a. Anterior pituitary
  - b. Kidney cortex
  - c. Spleen
  - d. Endocrine pancreas
19. 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
20. The average pulse rate in an adult is
  - a. 62
  - b. 65
  - c. 72
  - d. 80

**( PART-B : Descriptive )**

Time : 2 hrs. 40 min.

Marks : 50

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

1. Explain in brief the process of digestion of proteins and carbohydrates. 5+5=10
2. Write the composition of blood. Explain the functions of blood elaborately. 5+5=10
3. Explain the anatomy of human heart. Write the process of circulation of blood in heart. 4+6=10
4. Write the histology of skeletal muscle. Explain the method of muscle contraction. 4+6=10
5. What is neurotransmitter? Explain in brief with examples. Explain briefly the synaptic mode of transmission. 5+5=10
6. What are hormones? Classify hormones based on their chemistry. Explain the mechanism of action of hormones. 5+5=10
7. Explain the intrinsic and extrinsic pathway of blood clotting. 10
8. Explain the method of formation of urine. 10

== \*\*\* ==