REV-01
BAOT/63/68

2025/12

B.Sc. ANAESTHESIA & OPERATION THEATRE TECHNOLOGY
FIRST SEMESTER
PHYSIOLOGY
BAOT-104

SET B

[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. During which phase of the cardiac cycle do the ventricles contract?
   a. Atrial systole b. Ventricular systole
   c. Complete diastole d. None of the above
2. Which of the following is NOT an excretory product of the human body?
   a. Urea b. Carbon dioxide
   c. Sweat d. Oxygen
3. The master gland of the body is:
   a. Thyroid gland b. Pituitary gland
   c. Adrenal gland d. Pancreas
4. The main function of the digestive system is:
   a. Circulation of blood b. Hormone production
   c. Breakdown and absorption of food d. Oxygen exchange
5. The outermost layer of the kidney is called:
   a. Medulla b. Cortex
   c. Pelvis d. Capsule
6. The endocrine glands secrete their products directly into the:
   a. Bloodstream b. Lymph vessels
   c. Ducts d. Nerves
7. Digestion begins in which part of the alimentary canal?
   a. Stomach b. Mouth
   c. Small intestine d. Esophagus
8. The process of reabsorption of useful substances from filtrate takes place mainly in:
   a. Bowman's capsule b. Collecting duct
   c. Loop of Henle d. Proximal convoluted tubule
9. The female reproductive organ where fertilization usually occurs is the:
   a. Ovary b. Uterus
   c. Fallopian tube d. Cervix
10. The process of release of an ovum (egg) from the ovary is called:
    a. Menstruation b. Fertilization
    c. Implantation d. Ovulation

11. Homeostasis refers to:
    a. Growth of the body
    b. Maintenance of constant internal environment
    c. Energy production in cells
    d. Coordination of body systems

12. Which structure prevents food from entering the trachea during swallowing?
    a. Uvula
    b. Tongue
    c. Epiglottis
    d. Pharynx

13. Hemoglobin is responsible for:
    a. Clotting of blood
    b. Transport of oxygen and carbon dioxide
    c. Maintaining osmotic pressure
    d. Immunity

14. In ABO blood grouping, agglutination occurs when:
    a. Antigen meets the same antibody
    b. Antigen meets a different antigen
    c. Antibody meets a different antibody
    d. None of the above

15. Which of the following is the primary site of gas exchange in the lungs?
    a. Bronchi
    b. Bronchioles
    c. Alveoli
    d. Trachea

16. The dome-shaped muscle responsible for respiration is:
    a. Intercostal muscle
    b. Diaphragm
    c. Abdominal muscle
    d. Serratus anterior

17. Which of the following systems is responsible for coordination and control of body functions?
    a. Respiratory system
    b. Excretory system
    c. Circulatory system
    d. Nervous system

18. The structural and functional unit of the kidney is:
    a. Nephron
    b. Glomerulus
    c. Bowman's capsule
    d. Collecting duct

19. The heart muscle is called:
    a. Skeletal muscle
    b. Smooth muscle
    c. Cardiac muscle
    d. Voluntary muscle

20. The natural pacemaker of the heart is:
    a. AV Node
    b. SA Node
    c. Purkinje fibers
    d. Bundle of His

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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 composition, function of RBC, WBC and Platelet & Plasma. 10

2. Describe the history of ABO blood group system. Describe the process of blood clotting. 5+5=10

3. Describe the structure and function of the conducting system of the heart. Explain the role of each part in maintaining the heartbeat. Explain the cardiac cycle in details. 10

4. Draw and describe organ for Opthalmoception. 10

5. Describe in detail the major physiological functions of the nervous system — sensory, integrative, and motor functions. Explain each function with suitable examples. 10

6. Describe the composition of urine. Discuss how the body temperature is regulated. 10

7. Describe in details the movement of food in the alimentary tract. 10

8. Draw and describe the physiology of respiratory system. 10

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