

B.PHARM.
FIRST SEMESTER
HUMAN ANATOMY AND PHYSIOLOGY-I
BP-101 T

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 75

(PART-A : Objective)

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. What is the controlled condition?
 - a. It receives the input
 - b. Disruptions caused in homeostasis
 - c. Variable which is monitored
 - d. Receives output
2. Materials move out of a cell by the fusion with the plasma membrane of vesicles formed inside the cell is_____.
 - a. Endocytosis
 - b. Phagocytosis
 - c. Pinocytosis
 - d. Exocytosis
3. _____develop from monocytes and destroy bacteria and cell debris by phagocytosis.
 - a. Macrophages
 - b. Reticular fibers
 - c. Fibroblast
 - d. Mast cells
4. Which directional term can be used to describe 'away from the midline'?
 - a. Anterior
 - b. Superior
 - c. Lateral
 - d. Medial
5. Ceruminous glands are found in:
 - a. Lips
 - b. Forehead
 - c. External auditory canal
 - d. Skin of groin
6. When muscle contracts upon stimulation, calcium ions bind to _____, which exposes the binding sites for the myosin cross bridges to attach to
 - a. Actin
 - b. Myosin
 - c. Both a and b
 - d. Troponin
7. The appendicular skeleton has_____ bones.
 - a. 126
 - b. 80
 - c. 96
 - d. 128
8. The calcaneus forms the_____ of the foot.
 - a. Toes
 - b. Heel
 - c. Sole
 - d. None of the above
9. During blood coagulation thromboplastin is released from:
 - a. RBC
 - b. Blood plasma
 - c. Leucocytes
 - d. Damaged tissues
10. The hormone erythropoietin stimulates red blood cell production in the red bone marrow. Where in the body is erythropoietin produced?
 - a. Spleen
 - b. Kidney
 - c. Liver
 - d. Thyroid

11. Which of the following white blood cells is capable of phagocytosis?
- Basophils
 - Eosinophils
 - Lymphocyte
 - Neutrophils
12. What lymphatic structure absorbs lipid in the intestine?
- Lacteal
 - Lymphatic trunk
 - Lymphatic duct
 - Collecting vein
13. Which of the following nerves are responsible for the movement of the eye?
- Abducens nerve
 - Trochlear nerve
 - Oculomotor nerve
 - All of the above
14. Which nerve controls the Peripheral Nervous System which stimulates contraction and relaxation of the smooth muscle in the GI tract?
- X
 - V
 - VI
 - VII
15. Sympathetic nerves arise from:
- Thoracolumbar outflow
 - Craniosacral outflow
 - Cranial outflow
 - All of the above
16. The sympathetic nervous system postganglionic neuron releases which neurotransmitters?
- Acetylcholine
 - Serotonin
 - Norepinephrine
 - Dopamine
17. Myocardial contractility is best correlated with the intracellular concentration of:
- Na⁺
 - K⁺
 - Ca²⁺
 - None of the above
18. P wave is due to:
- atrial repolarization
 - atrial depolarization
 - atrial systole
 - atrial diastole
19. Cardiac output is the product of _____ x _____.
- Stroke volume, heart rate
 - Heart rate, peripheral vascular resistance
 - Cardiac reserve, stroke volume
 - Stroke volume, ventricular end-diastolic volume
20. The left side of the heart is the pump for _____.
- Systemic circulation
 - Pulmonary circulation
 - Both a and b
 - Lymphatic circulation

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 35

[Answer any seven (7) questions]

1. Give an account on the formed elements of blood. 5
2. Give a brief account on the four principal type of cells found in the epidermis. What are the functions of the skin? 3+2=5
3. Write a short note on lymph nodes and its functions. 5
4. List out the cranial nerves with their functions. 5
5. Describe the electrocardiogram representation. 5
6. Short note on the common errors of refraction. 5
7. Describe long term control of blood pressure. 5
8. Describe primary and secondary active transport with suitable examples. 5
9. Based on the shape, bones are classified into five types. Explain. 5

(PART-C : Long type questions)

[Answer any two (2) questions]

1. What is homeostasis? Explain positive and negative feedback mechanism with suitable examples. What are the different forms of intracellular signaling? 2+5+3=10
2. Enlist the various clotting factors. Explain about extrinsic, intrinsic and common pathway involved in blood clotting cascade. 10
3. Give a brief description on Cranial bones with suitable diagram. 10

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