

Student's name:

ID:

MCQ: Choose the correct answer to the following questions:

1. The abdominopelvic cavity is ____ to the diaphragm.

- (A) Lateral
- (B) Superior
- (C) Intermediate
- (D) Inferior

2. The cranial cavity contains the:

- (A) Spinal cord.
- (B) Uterus
- (C) Kidneys
- (D) None of the above

3. The only plane that can divide the body into equal halves is the

- (A) Sagittal plane
- (B) Transverse plane
- (C) Midsagittal plane
- (D) Frontal plane

4. What component of the cell is involved in assembly of the ribosomal subunits?

- (A) Chromatin
- (B) Nuclear membrane
- (C) Nucleolus
- (D) Nuclear pores

5. These are primarily responsible for the movement of fluid between plasma and interstitial fluids.

- (A) Hydrostatic pressure and osmotic pressure
- (B) Osmosis and active transport
- (C) Endocytosis and exocytosis
- (D) Membrane channels

6. The capillary endothelium separates these two body fluid compartments

- (A) ICF and ECF
- (B) ICF and interstitial fluid
- (C) Cerebrospinal and brain tissue fluid
- (D) Plasma and interstitial fluid

7. Which of these body fluid compartments contains the highest concentration of proteins?

- (A) Lymph
- (B) Cerebrospinal fluid
- (C) Interstitial fluid
- (D) ICF

8. Which of these cannot pass directly through the phospholipids of the plasma membrane?

- (A) Glucose
- (B) Lipid-soluble molecules
- (C) Small ions
- (D) CO₂

9. Which of the following statements about diffusion is true?

- (A) It is a passive process
- (B) It occurs when molecules move from a region of lower concentration to a region of higher concentration
- (C) It always requires integral proteins of the cell membrane
- (D) It requires expenditure of energy by the cell

10. What name is given to the process by which water crosses a selectively permeable membrane?

- (A) Diffusion
- (B) Passive transport
- (C) Facilitated diffusion
- (D) Osmosis

11. A white blood cell engulfing a bacterium is an example of ____.

- (A) Exocytosis
- (B) Ameboid motion
- (C) Phagocytosis
- (D) Diapedesis

12. Endocytosis moves materials ____ a cell via ____.

- (A) Into ... membranous vesicles
- (B) Into ... a transport protein
- (C) Out of ... diffusion
- (D) Out of ... membranous vesicles

13. This material typically cannot move through the capillary wall.

- (A) fattyacids
- (B) Oxygen
- (C) Protein
- (D) Hormones

14. Given these chemicals:

1. Fibrin
2. Fibrinogen
3. Prothrombin
4. Thrombin
5. Tissue factor

Choose the arrangement that lists the chemicals in the order they are active during clot formation.

- (A) 1,3,4,2,5
- (B) 2,3,4,5,1
- (C) 3,5,1,4,2
- (D) 4,3,2,5,1

15. Platelets are formed from what type of cell?

- (A) Agranulocytes
- (B) Macrophages
- (C) Fibrinogens
- (D) Megakaryocytes

16. Where are the calcium ions, needed for muscle contraction, stored?

- (A) T-tubules
- (B) Sarcoplasmic reticulum
- (C) Sarcoplasm
- (D) Sarcolemma

17. What chemical causes the permeability of the muscle cell membrane to change?

- (A) Calcium
- (B) Sodium
- (C) ATP
- (D) Acetylcholine

18. The lining of the inner walls of the heart's chambers is termed the:

- (A) Visceral pericardium
- (B) Serous pericardium
- (C) Epicardium
- (D) Endocardium

19. The outermost layer of the heart's serous pericardium is termed the:

- (A) Parietal pericardium
- (B) Epicardium
- (C) Myocardium
- (D) Endocardium

20. The heart's natural pacemaker is termed the:

- (A) Sinoatrial node
- (B) Bundle of His
- (C) Atrioventricular node
- (D) Purkinje fibers

21. Which blood vessel wall layer is correctly matched with a statement about its tissue structure?

- (A) Tunica externa - consists of smooth muscle tissue
- (B) Tunica interna (intima) - consists of a fibrous connective tissue
- (C) Tunica externa - consists of simple squamous epithelium
- (D) Tunica media - consists of smooth muscle and elastic connective tissue.

22. Which of the following statements best describes arteries?

- (A) All arteries carry oxygenated blood towards the heart
- (B) All arteries contain valves to prevent the back-flow of blood
- (C) All arteries carry blood away from the heart
- (D) Only large arteries are lined with endothelium

23. Blood returning to the heart from the inferior vena cava would enter the:

- (A) Left atrium
- (B) Right atrium
- (C) Left ventricle
- (D) Right ventricle

24. Blood in the pulmonary arteries:

- (A) Enters the heart's right ventricle
- (B) Is heading towards the lungs
- (C) Leaves the left ventricle to enter the aorta
- (D) Flows from the lungs towards the heart's left atrium

25. Deoxygenated blood is normally found only:

- (A) In the heart's atria
- (B) In the heart's ventricles
- (C) In the right side of the heart
- (D) In the left side of the heart

26. Closing of the _____ normally prevents backflow of blood into the left ventricle, while closing of the _____ normally prevents backflow of blood into the right ventricle:

- (A) Tricuspid valve
- (B) Bicuspid valve
- (C) Pulmonary valve
- (D) Aortic valve

27. On a normal ECG, ventricular depolarization occurs during the:

- (A) P wave
- (B) QRS complex
- (C) S-T segment
- (D) T wave

28. The left ventricle's myocardium is thicker than the right ventricle's myocardium in order to:

- (A) Accommodate a greater volume of blood
- (B) Increase the size of the thoracic cavity during diastole
- (C) Contract with a greater pressure
- (D) Force blood through the semilunar valve

29. Venous return is promoted by:

- (A) Dilation of the veins
- (B) Loss of the venous valves
- (C) Increased skeletal muscle activity
- (D) Decreased respiratory rate

Matching :

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|----------------------------|--|--------------------------|
| The control center | | 1. Mitochondria |
| The factory area | | 2. Endoplasmic reticulum |
| The power house | | 3. Nucleus |
| The protein synthesizer | | 4. Golgi Apparatus |
| The traffic director | | 5. Lysosomes |
| The demolition site | | 6. Ribosomes |
| The minicirculatory system | | 7. Cytoplasm |
| The cell bone and muscle | | 8. Cytoskeleton |

Describe the structure of the following. How is the structure related to their function in the body?

1) RBC

2) Plasma membrane

3) Capillaries