LSEP_1_T3_Revision exercise

1. Goblet cell are found in _____ and they secrete _____.
   A. glandular epithelium; hormones.
   B. glandular epithelium; sweat.
   C. mucosal lining; mucus.
   D. mucosal lining; watery fluid.
   E. serous membrane; watery fluid.

2. Epithelial tissue:
   A. is highly vascularized.
   B. is richly innervated.
   C. does not regenerate.
   D. contains few cells in a matrix.
   E. contains cells that adhere to one another through their basal surfaces.

3. Ciliated epithelium is found lining the
   A. gastrointestinal tract.
   B. renal tubules.
   C. respiratory tract.
   D. skin surface.
   E. urinary bladder.

4. Which of the following is the most abundant type of tissue in the body?
   A. Connective tissue
   B. Covering epithelial tissue
   C. Glandular epithelial tissue
   D. Muscle tissue
   E. Nervous tissue

5. Which of the following planes passes through the midline of the body and divides it into equal right and left halves?
   A. The frontal plane
   B. The median plane
   C. The oblique plane
   D. The sagittal plane
   E. The transverse plane

6. Which of the following planes divides the body into superior and inferior parts?
   A. The coronal plane
   B. The median plane
   C. The oblique plane
   D. The sagittal plane
   E. The transverse plane

7. Which of the following planes divide the body into the anterior and posterior parts?
   A. The coronal plane
   B. The frontal plane
   C. The median plane
   D. The oblique plane
   E. The transverse plane

8. Which of the following organs are found in the dorsal cavity of the body?
   A. The bladder and ureters
   B. The brain and spinal cord
   C. The heart and lungs
   D. The kidneys and ureters
   E. The liver and gall bladder

9. Which of the following organs is found in the mediastinum?
    A. The heart
    B. The liver
    C. The lungs
    D. The stomach
    E. The uterus

10. The epicardium is also known as the
    A. endocardium.
    B. fibrous pericardium.
    C. myocardium.
    D. parietal pericardium.
    E. visceral pericardium.

11. Which of the following describes the layers of and around the heart, from superficial to deep?
    A. Myocardium → fibrous pericardium → parietal pericardium → visceral pericardium
    B. Fibrous pericardium → parietal pericardium → visceral pericardium → myocardium
    C. Fibrous pericardium → visceral pericardium → parietal pericardium → myocardium
    D. Parietal pericardium → fibrous pericardium → myocardium → visceral pericardium
    E. Visceral pericardium → parietal pericardium → myocardium → fibrous pericardium

12. The coronary arteries arise from:
    A. aortic arch.
    B. ascending aorta.
    C. descending aorta.
    D. pulmonary trunk.
    E. superior vena cava.

13. Which of the following heart valves is located between the right atrium and right ventricle?
    A. The aortic valve.
    B. The bicuspid valve.
    C. The mitral valve.
    D. The pulmonary valve.
    E. The tricuspid valve.

14. Mitral valve is also known as
    A. aortic valve.
    B. bicuspid valve.
    C. right AV valve.
    D. semilunar valve.
    E. tricuspid valve.

15. Which of the following heart valves are also known as the semilunar valves?
    A. Aortic valve and bicuspid valve
    B. Aortic valve and pulmonary valve
    C. Bicuspid valve and tricuspid valve
    D. Pulmonary valve and tricuspid valve
    E. Pulmonary valve and bicuspid valve

16. Which of the following heart valves are closed during ventricular systole?
    A. Aortic valve and bicuspid valve
    B. Aortic valve and pulmonary valve
    C. Bicuspid valve and tricuspid valve
    D. Pulmonary valve and tricuspid valve
    E. Pulmonary valve and bicuspid valve

17. Tricuspid valve prevents backflow of blood into the
    A. left atrium during ventricular diastole.
    B. left atrium during ventricular systole.
    C. left ventricle during ventricular diastole.
    D. right ventricle during ventricular diastole.
    E. right atrium during ventricular systole.

18. Which structure of the conducting system of the heart carries electrical signal through the ventricular wall?
    A. Atrioventricular node
    B. Bundle of His
    C. Purkinje fibres
    D. Sinoatrial node
    E. The bundle branches

19. Which structure of the conducting system normally initiates the electrical activity of the heart?
    A. Atrioventricular node
    B. Bundle of His
    C. Purkinje fibres
    D. Sinoatrial node
    E. The bundle branches

20. Which of the following blood vessels contain oxygenated blood?
    A. Pulmonary arteries
    B. Pulmonary veins
    C. Superior vena cava
    D. Inferior vena cava
    E. Umbilical arteries

21. Which of the follow statements is correct?
    A. Umbilical arteries deliver deoxygenated blood to the foetus.
    B. Umbilical arteries deliver oxygenated blood to the placenta.
    C. Umbilical vein delivers oxygenated blood to the foetus.
    D. Umbilical vein delivers deoxygenated blood to the placenta.
    E. Umbilical vein delivers deoxygenated blood to the foetus.

22. Which of the following blood vessels do not have the ability to constrict or dilate?
    A. Arteries
    B. Arterioles
    C. Capillaries
    D. Venules
    E. Veins

23. Which of the following vessels act as blood reservoir?
    A. Arteries
    B. Arterioles
    C. Capillaries
    D. Veins
    E. Lymph vessels

24. Which of the following blood vessels are major resistance vessels for controlling blood flow to organs?
    A. Arteries
    B. Arterioles
    C. Capillaries
    D. Venules
    E. Veins

25. Which of the following lymphoid tissues is the site of production of lymphocytes?
    A. The bone marrow
    B. The thymus
    C. The spleen
    D. The tonsils
    E. The adenoids

26. Which of the following structures do B cells mature in?
    A. The tonsils
    B. The yolk sac
    C. The thymus
    D. The bone marrow
    E. The spleen

27. Which of the following people would have the lowest body water content?
    A. A female athlete
    B. An male athlete
    C. An infant
    D. An older adult with BMI of 20
    E. An older adult with BMI of 30

28. Which of the following fluid compartments has the highest volume?
    A. Extracellular fluid
    B. Interstitial fluid
    C. Intracellular fluid
    D. Intravascular fluid
    E. Transcellular fluid

29. How many molecule(s) of O_2 can one haemoglobin molecule carries?
    A. 1
    B. 2
    C. 3
    D. 4
    E. 8

30. Which of the following solution has the highest osmolality?
    A. Isotonic solution
    B. Hypotonic solution
    C. Hypertonic solution
    D. Plasma
    E. Pure water

31. Hyponatremia may be treated by infusing
    A. 0.45% NaCl solution
    B. 0.9% NaCl solution
    C. 3% NaCl solution
    D. 5% dextrose solution
    E. Albumin 5% solution

32. Which of the following white blood cells is the most abundant in the blood?
    A. Basophil
    B. Eosinophil
    C. Lymphocyte
    D. Monocyte
    E. Neutrophil

33. Which of the following solutions is a plasma expander for infusion to a hypovolemic patient?
    A. 0.45% NaCl solution
    B. 0.9% NaCl solution
    C. 3% NaCl solution
    D. 5% dextrose solution
    E. Albumin 5% solution

34. Which of the following white blood cells release histamine when they are activated?
    A. Basophil
    B. Eosinophil
    C. Lymphocyte
    D. Monocyte
    E. Neutrophil

35. The majority of lymphocytes are found in the
    A. blood.
    B. bone marrow.
    C. lymphoid tissues.
    D. tissue.
    E. thymus.

36. Which of the following white blood cells helps fight parasitic worms?
    A. Basophil
    B. Eosinophil
    C. Lymphocyte
    D. Monocyte
    E. Neutrophil

37. Which of the following mineral is essential for formation of red blood cells?
    A. Magnesium
    B. Iodine
    C. Iron
    D. Selenium
    E. Zinc

38. Which of the following sites have lymph that contains the highest lipid content?
    A. The axilla
    B. The heart
    C. The kidney
    D. The large intestine
    E. The small intestine

SAQ

1. The circulation systems in the human body consists of two circulations.
    a. What are the TWO circulations?
    b. Which circulation has lower pressure and lower resistance?
    c. Which blood vessel carries blood away from the right ventricle?
    d. Which heart chamber receives deoxygenated blood from the body?
    e. Which blood vessel delivers blood from the upper part of the body to the heart?
    f. Which chamber(s) of the heart contain oxygenated blood?
    g. Explain why blood supply to most organs in the body is in-parallel with each other.

2. Pulse pressure can be changed in normal physiological and pathological conditions.
    a. What is pulse pressure?
    b. What are the factors that affects pulse pressure?
    c. Explain why pulse pressure is increased during exercise.
    d. Aortic regurgitation is a condition where the aortic valve cannot not close completely leading to back flow of blood into the left ventricle during ventricular diastole. Explain the change to pulse pressure in patients with aortic regurgitation.
    e. Aortic stenosis is a condition where aortic valves cannot open fully leading to a higher resistance for the left ventricle to pump blood into the aorta. Explain the change to pulse pressure in patients with aortic stenosis.

Please also complete the Anatomy revision exercise!