University of Fort Hare

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Programme Unit: Nursing Sciences
East London Campus

SEMESTER EXAMINATION: JUNE 2023

Basic Anatomy for Speech & Hearing

TIME: 3 HOURS **CODE: APH 111E** MARKS: 100

Student Surname (Capital) ----------

Student Names (Capital) ----------

Student Number ----------

THIS QUESTION PAPER CONSISTS OF 10 PAGES INCLUDING THIS PAGE

INTERNAL EXAMINERS
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Instructions to students:

This question paper consists of four sections (A, B, C, D) and all questions are compulsory.
Answer Section A, Section B and Section C on the question paper and Section D on the answer book. Submit question paper along with answer book.

APH 111E SEMESTER EXAMINATION 2023

Section A (30)

Choose & circle the most correct option:

1. Stratified epithelia consist of
   a. Single layer of cells
   b. Two or more layers of cells
   c. Single layer as well as more layers of cells
   d. Three layers of cells

2. Pseudostratified columnar epithelium lines:
   a. Most of the upper respiratory tract
   b. Kidney glomeruli
   c. Female genital tract
   d. Air sacs of lungs

3. Non-keratinized stratified squamous epithelium form:
   a. Epithelium of the skin
   b. Lining of mouth and oesophagus
   c. Lining of urinary organs
   d. Kidney glomeruli

4. The extracellular matrix of connective tissue consists of:
   a. Ground substance and fibres
   b. Ground substance and cells
   c. Only fibres
   d. Fibres and cells

5. Hyaline cartilage is present in:
   a. Tenders
   b. Ligaments
   c. The costal cartilages of ribs
   d. Aponeuroses

6. Which of the following muscle are involuntary muscles:
   a. Biceps muscles
   b. Muscles of intestines
   c. Deltoid muscle
   d. Hamstring muscles

7. Which of the following blood cells is agranular leucocyte?
   a. Neutrophil
   b. Eosinophil
   c. Basophil
   d. Lymphocyte

8. Which of the following blood cells are increased in acute infections in the body?
   a. Lymphocytes
   b. Monocytes
   c. Neutrophils
   d. Macrophages

9. The red blood cell count ranges from:
   a. 2.5 – 3.5 million cells/µl
   b. 1.5 – 2 million cells/µl
   c. 5.1 – 5.8 million cells/µl
   d. 2 – 3 million cells/µl

10. Which of the following blood cells are required for clotting of blood after injury?
    a. Red blood cells
    b. Neutrophils
    c. Lymphocytes
    d. Platelets

11. Which part of the pharynx contains pharyngeal tonsil (adenoids)?
    a. Nasopharynx
    b. Oropharynx
    c. Laryngopharynx
    d. Paranasal sinuses

12. Epiglottis keeps the laryngeal inlet:
    a. Opens when only air is flowing through the larynx
    b. Open when food is passing from pharynx into the oesophagus
    c. Always open during air passage as well as food passage
    d. Always closed

13. Which of the following blood vessels carries deoxygenated blood from the heart to the lungs?
    a. Pulmonary artery
    b. Pulmonary vein
    c. Branchial artery
    d. Thoracic artery

14. Oxygenated blood is supplied to the lungs by:
    a. Bronchial artery
    b. Pulmonary trunk
    c. Pulmonary vein
    d. Superior vena cava

15. Mediastinum:
    a. Is synonymous with thoracic cavity
    b. Houses lungs
    c. Doesn't occupy part of thoracic cavity
    d. Houses heart, great vessels, bronchi & oesophagus

16. Which of the following organs secretes bile?
    a. Liver
    b. Gall bladder
    c. Pancreas
    d. Small intestine

17. The site of production of secretin and cholecystokinin is:
    a. Stomach
    b. Gall bladder
    c. Small intestine
    d. Large intestine

18. The gall bladder:
    a. Produces bile
    b. Is attached to the pancreas
    c. Stores and concentrates bile
    d. Produces secretin

19. Which of the following is not the characteristic of the large intestine?
    a. It is divided into ascending, transverse and descending portions.
    b. It contains abundant bacteria some of which synthesize certain enzymes.
    c. It is the main absorptive site.
    d. It absorbs remaining water in the wastes

20. The pH of urine is usually:
    a. Slightly acidic (around 6)
    b. Alkaline
    c. Strongly acidic
    d. Strongly alkaline

21. The presence of proteins or blood cells in the urine usually indicates:
    a. A problem with the filtration membrane
    b. A problem with loop of Henle
    c. A problem with the collecting ducts
    d. A problem with vasa recta

22. Freshly oxygenated blood is first received by the:
    a. Right atrium
    b. Left atrium
    c. Right ventricle
    d. Left ventricle

23. The chordae tendineae:
    a. Close the atrioventricular valves
    b. Prevent the atrioventricular valve flaps from everting
    c. Contract the papillary muscles
    d. Open the semilunar valves

24. Which of the following blood vessels have intimate contact with tissue cells & directly serve cellular needs:
    a. Venules
    b. Conducting arteries
    c. Capillaries
    d. Arterioles

25. Which of following layer of blood vessels is critical in regulating circulatory dynamics by changing vessel diameter:
    a. Endothelium
    b. Tunica externa
    c. Subendothelium
    d. Tunica media

26. Which of the following provides degree of rigidity to the Aryepiglottic fold?
    a. Thyroid
    b. Corniculate
    c. Cuneiform
    d. Cricoid

27. Which of the following cartilage resides on the superior posterolateral surface of cricoid cartilage?
    a. Corniculate
    b. Arytenoid
    c. Cuneiform
    d. Epiglottis

28. Which of the following is the most important cartilage of the Larynx?
    a. Thyroid
    b. Epiglottis
    c. Cricoid
    d. Arytenoid

29. Lymph is equivalent in its composition to:
    a. Blood
    b. Urine filtrate
    c. Sweat
    d. Interstitial fluid

30. Which of the following is the principle lymphoid organ in the body?
    a. Spleen
    b. Tonsils
    c. Peyer's patches in intestine
    d. Lymph nodes

Section B **(15)**

Choose and circle the correct option:

1. At gap junctions, adjacent cells are very close and are abundant in the skin. (True) or (False)
2. Peroxisomes detoxify free radicals and therefore are abundant in intestines. (True) or (False)
3. Free ribosomes make proteins required for cell membranes. (True) or (False)
4. Coronal plane is a vertical plane which divides the body into anterior and posterior. (True) or (False)
5. Ankle is distal to the knee joint. (True) or (False)
6. The Arytenoid cartilages help move the vocal folds allowing tension, relaxation or approximation of vocal folds as they are attached to the Arytenoids. (True) or (False)
7. Magnetic resonance imaging is valuable in intracranial and spinal imaging. (True) or (False)
8. The respiratory zone structures consist of terminal bronchiole, alveolar ducts and alveoli. (True) or (False)
9. When adenoids are swollen due to infection, they block the air passage in the nasopharynx leading to mouth breathing. (True) or (False)
10. During right ventricle contraction, oxygenated blood is poured into pulmonary artery. (True) or (False)
11. Sinusoidal capillaries are found in liver, spleen and bone marrow. (True) or (False)
12. Deoxygenated blood from the heart is collected in coronary sinus and poured in the right atrium. (True) or (False)
13. Persons with Rh positive blood group do not carry antibodies in their blood. (True) or (False)
14. Persons with O positive blood group have anti-A and anti-B antibodies in the blood. (True) or (False)

15. Lymph nodes, with the help of its immune cells, try to control cancer cells from multiplying and spreading to other body organs via blood. (True) or (false)

Section C (5)

Choose the most correct option from the multiple answers and write in the column B for the structures of urinary system in the column A

Column A	Column B
Descending limb of loop of Henle	
Kidney	
Vasa recta	
Granular cells	
Juxtamedullary nephrons	

Multiple answers: Regulation of systemic blood pressure, Peritubular capillary network of cortical nephrons, Gluconeogenesis, Peritubular capillary network of juxtamedullary nephrons, Glycogenolysis, Reabsorption of water, Formation of concentrated urine, Reabsorption of solutes, Getting rid of excess potassium from the body, Regulation of rate of filtrate formation.

Section D (50)

1. Define the following: (5)
   1.1 Mid-saggital plane
   1.2 Medial
   1.3 Proximal
   1.4 Apoptosis
   1.5 Anatomical position

2. Write function of the following: (9)
   2.1 Mitochondria
   2.2 Ribosomes
   2.3 Golgi apparatus
   2.4 Smooth endoplasmic reticulum
   2.5 Extrinsic Laryngeal muscles
   2.6 Saliva
   2.7 Small intestine
   2.8 Liver
   2.9 Pancreas

3. List the following: (13)
   3.1 Branches of arch of aorta
   3.2 Vital signs of the body
   3.3 Organs of Resonation
   3.4 Processes involved in the formation of urine

4. Explain the clinical significance of the following: (6)
   4.1 Surfactant
   4.2 Heart valves
   4.3 Dorsalis pedis artery

5. Explain the various constituents of 'Cytoskeleton' of the cell. (6)
6. Explain the various membrane junctions of the cell. (6)
7. Explain 'Bernoulli effect'. (5)