



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS**  
**FIRST YEAR EXAMINATION FOR THE AWARD OF THE**  
**DIPLOMA IN CLINICAL MEDICINE AND SURGERY**  
**FIRST SEMESTER, 2021/2022**  
**(JULY, 2022)**

**CIMS 0113: HUMAN ANATOMY**

**STREAM: Y1 S1**

**TIME: 2 HOURS**

**DAY: THURSDAY, 3:00 – 5:00 P.M.**

**DATE: 21/07/2022**

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**INSTRUCTIONS:**

***1. Do not write anything on this question paper.***

**SECTION A:SHORT ANSWER QUESTIONS (60MKS)**

- 1.what are gonads. With well labelled diagrams briefly describe the male reproductive system.
- 2.Describe the structures of blood vessels and explain the relationship between them.
3. Explain how the valves in blood vessels keep the blood moving in one direction.
- 4.Describe the main structures of the male and female external genitalia.
- 5.Describe the three region of the pharynx, their blood and nerve supply.
6. Briefly describe the structure of different levels of airway

**SECTION B: LONG ESSAY QUESTIONS**

- 1.Describe the structure of the heart and its position within the thorax, blood supply and nerve supply.
- 2.Describe the location and structure of the uterus and uterine tubes indicating the blood supply and nerve supply.
- 3.Compare and contrast the conducting and respiratory zones of the lungs

**SECTION C:ANSWER ALL QUESTIONS IN THIS SECTION**

- 1.Arteries are blood vessels that:
  - a)carry blood away from the heart
  - b)carry oxygenated blood
  - c)carry blood towards the heart
  - d)carry deoxygenated blood
  - e)carry blood at low pressure

2. The systemic circulation includes all of the following structures except one. Which is the exception?
- a) the aorta
  - b) the femoral vein
  - c) the superior vena cava
  - d) the pulmonary vein
  - e) the renal artery
3. Vascular resistance is determined by:
- a) length of a blood vessel
  - b) viscosity of blood
  - c) the way blood flows through a vessel
  - d) diameter of a blood vessel
  - e) blood pressure
4. In the heart, valves that ensure one-way flow of blood are found:
- a) between the atria and the ventricles
  - b) between the ventricles and the arteries
  - c) between the vena cavae and the atria
  - d) options A and B
  - e) option a and c
5. Within the circulation, where is blood pressure highest?
- a) in the vena cava (great veins)
  - b) in the left ventricle
  - c) in the right ventricle
  - d) in the pulmonary artery
  - e) in the left atrium
6. Which of the following structures is NOT part of the upper respiratory tract?
- a) larynx
  - b) trachea
  - c) lung
  - d) epiglottis
  - e) pharynx
7. Which of the following is NOT a characteristic feature of alveoli in the lung?
- a) large surface area
  - b) thin walls
  - c) chemical layer called surfactant
  - d) poor blood supply
  - e) moist surface
8. Most of the oxygen being transported by blood:
- a) is dissolved in plasma
  - b) is attached to glucose
  - c) is reversibly bound to haemoglobin
  - d) is used to provide energy for the heartbeat

e) is carried in the form of bicarbonate, ( $\text{HCO}_3^-$ )

9. What is the anatomically correct name for windpipe?

- a) pharynx
- b) bronchiole
- c) larynx
- d) alveolar duct
- e) trachea

10. Sperm production begins in the

- a) seminiferous tubules
- b) epididymis
- c) vas deferens
- d) ejaculatory duct

11. The cell produced by fertilization is called

- a) gamete
- b) embryo
- c) fetus
- d) zygote

12. The production of testosterone in the interstitial cells is stimulated by

- a) inhibin
- b) luteinizing hormone
- c) follicle-stimulating hormone
- d) progesterone

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**TRUE OR FALSE**

16. An essential organ of reproduction is known as a:

- a) gamete
- b) gender
- c) gluteal

- d)glucagon
- e)gonad

17.In adult males, sperm are produced in the:

- a)epididymis
- b)testis
- c)vas deferens
- d)scrotum
- e)ovary

18.In adult males, what are the cells which produce testosterone known as?

- a)spermatogonia
- b)Leydig cells
- c>Sertoli cells
- d)spermatids
- e)varicocele

19.What is the tube through which both urine and semen leave a man's body called?

- a)epididymis
- b)spermatic cord
- c)seminiferous tubule
- d)urethra
- e)ureter

20.What is the membrane that covers the opening of the vagina called?

- a)the mons pubis
- b)the labia minora
- c)the hymen
- d)the labia majora
- e) the perineum

21.Which phase of the ovarian cycle is characterised by growth and development of follicles?

- a)luteal phase
- b)ovulation
- c)menstruation
- d)follicular phase
- e)LH surge

22.If an ovum (egg) is fertilised by a sperm, it usually takes place in the:

- a)ovary
- b)fallopian tube (oviduct)
- c)endometrium
- d)myometrium
- e)cervix

23.The following carries blood to the lungs?

- a) Left pulmonary artery
- b) Left pulmonary vein
- c) Right pulmonary artery

d) Right pulmonary vein

24. What is the steroid hormone which is produced by a corpus luteum after ovulation?

- a) progesterone
- b) prolactin
- c) testosterone
- d) inhibin
- e) perineum

25. Indicate if true or false.

- a) Oxygen gets collected into our bodies when we breathe out.
- b) There are two loops in the circulatory system.
- c) Your heart pumps blood around your body for 22 hours of the day.
- d) It takes around 20 seconds for a red blood cell to travel around the body.

26. Write true if the statement is true or false if the statement is false.

- a) In adults, the normal mass of the heart is 100-200 grams.
- b) The right side of the heart collects oxygenated blood from the body.
- c) Valves in the heart maintain the flow of blood.
- d) Cardiac muscle is self-exciting.
- e) The heartbeat is made up of three parts.

27. In the respiratory system, most CO<sub>2</sub> is transferred in the plasma:

- a). by a process of dissolution
- b) in combination with hemoglobin
- c). as bicarbonate ions
- d). a and b
- e). none of the above

28. . Respiratory rate will be increased in response to:

- a.) decreased pO<sub>2</sub>
- b. ) increased p CO<sub>2</sub>
- c. ) lowered pH
- d.) all of the above
- e. ) a and b only

29. The trachea:

- a) contains the tonsils
- b). serves as the organ of voice
- c) contains the oropharynx
- d). contains C-shaped rings of cartilage
- e). a and d

30. Which of these statements apply to the thyroid cartilage?

- a) most inferior of the laryngeal cartilage
- b) act as a lid over the glottis
- c) largest laryngeal cartilage
- d) called "Adams Apple"
- e) c and d