



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF THE
DIPLOMA IN CLINICAL MEDICINE AND SURGERY
SECOND SEMESTER, 2021/2022
(FEBRUARY - JUNE, 2022)

CIMS 0113: HUMAN ANATOMY II

STREAM: Y1 S2

TIME: 2 HOURS

DAY: THURSDAY, 9.00 – 12.00 PM

DATE: 05/05/2022

INSTRUCTIONS

Do not write anything on this question paper.

SECTION A: SHORT ANSWER QUESTIONS (60MKS)

1. Describe the structures of arteries, veins, capillaries and explain the relationship between them. (10marks)
2. Which type of blood vessels contains valves? Explain how the valves keep the blood moving in one direction. (10marks)
3. Draw well labelled diagrams of female and male reproductive system. (10marks)
4. Describe the main structures of the external genitalia. (10marks)
5. Describe the three regions of the pharynx, blood and nerve supply. (10marks)
6. Compare and contrast the conducting and respiratory zones. (10marks)

SECTION B: LONG ESSAY QUESTIONS answer any TWO

1. Describe the structure of the heart and its position within the thorax, blood supply and nerve supply. (20marks)
2. Describe the location and structure of the uterus and uterine tubes indicating the blood supply and nerve supply. (20marks)
3. Describe the structure of different levels of airway. (20marks)

SECTION C: ANSWER ALL QUESTIONS IN THIS SECTION (one correct answer)

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 flow 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, (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 CO₂ 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 pO₂
- b.) increased p CO₂
- 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