



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012
SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (MEDICAL LABORATORY)

HML 103: ANATOMY 2

DATE: Monday 2nd April 2012

TIME: 11.00a.m -1.00p.m

INSTRUCTIONS

SECTION A (Each question is 5 marks)

1. Describe the structure of the nephron, indicating the functions of the different parts.
2. Describe the structures involved in the air blood barrier, indicating the adaptations of the respiratory system to its functions.
3. Describe the boundaries and contents of the popliteal fossa.

SECTION B (Each question is 20 marks)

1. Discuss the organization of blood as a tissue.
2. Describe the histological structure and function of the liver. Indicate how you can investigate its functions.

SECTION C (Each question is half a mark)

1. Motor activities are integrated in which lobe of the cerebrum
 - a. Occipital
 - b. Frontal
 - c. Temporal
 - d. Insular
2. The receptive parts of a neurone are called
 - a. Axon
 - b. Dendrite
 - c. Synapse
 - d. Cell body
3. Which artery supplies the brain stem
 - a. Basilar
 - b. Posterior cerebral
 - c. Recurrent
 - d. Internal carotid
4. Functions of muscles include all the following except
 - a. Leverage
 - b. Movement
 - c. Heat production

- d. Joint stabilization
- 5. The predominant intracellular cation is
 - a. Sodium
 - b. Potassium
 - c. Calcium
 - d. Phosphorus
- 6. The functional unit of a skeletal muscle is called a
 - a. Myosin
 - b. Actin
 - c. Sarcomere
 - d. Tropomyosin
- 7. Not a component of the basal ganglia
 - a. Caudate
 - b. Putamen
 - c. Globus pallidus
 - d. Substantia nigra
- 8. Which of the following hormones is not produced by the hypothalamus
 - a. Prolactin
 - b. Corticotropin releasing hormone
 - c. Oxytocin
 - d. Antidiuretic hormone
- 9. Serum levels of calcium are regulated by all the following except
 - a. Parathyroid gland
 - b. Thyroid gland
 - c. Kidney
 - d. Cartilage
- 10. Which of the following hormones produced by adipose tissue is incorrectly matched with its functions
 - a. leptin – inhibits appetite
 - b. Adiponectin - Pro-inflammatory
 - c. Resistin – unclear functions
 - d. Estrone – regulates bone loss after menopause
- 11. Which of the following muscles DOES NOT flex the knee joint
 - a. Sartorius
 - b. Adductor magnus
 - c. Biceps femoris
 - d. Semimembranosus
- 12. Superficial inguinal lymph node drains:
 - a. Popliteal fossa
 - b. Dorsum of the foot
 - c. Glans penis
 - d. Superior 1/3 of the vagina
- 13. Contents of the foramen ovale include all EXCEPT
 - a. Lesser petrosal nerve
 - b. Accessory meningeal artery
 - c. Maxillary nerve
 - d. Mandibular nerve
- 14. False concerning the SCALP
 - a. Composed of five layers

- b. Occipital frontalis is innervated by the ophthalmic nerve.
 - c. Nerves are found in the fourth deepest layer.
 - d. Scalp wounds bleed profusely
15. In which epidermal layer are Langerhan cells predominantly found
- a. Basale
 - b. Spinosum
 - c. Corneum
 - d. Lucidum
16. Which of the following is false regarding melanocytes
- a. Lack desmosome contact with keratinocytes
 - b. Are found in the basal layer
 - c. Are completely absent in albinism
 - d. Of neurocrest origin
17. Regarding the axilla, which one is NOT true?
- a. Most breast lymphatics drain to the axilla
 - b. The radial nerve arises from the posterior cord of the brachial plexus
 - c. Pectoral muscles form the anterior boundary
 - d. The 3rd part of the axillary artery has no branches
18. Which of the following is NOT a stability factor of the shoulder joint
- a. Pectoralis minor muscle
 - b. Rotator cuff
 - c. Coracoacromial arch
 - d. Deltoid muscle
19. Injury to which of the following nerves will result in wrist drop
- a. Median
 - b. Ulnar
 - c. Radial
 - d. Musculocutaneous
20. Which of the following statements is TRUE about the intercostal space
- a. Contains neurovascular structures that are found in its superior aspect
 - b. Is of uniform size in its entire length
 - c. The neurovascular bundle is found between external and internal intercostals muscles
 - d. Aspiration of the pericardium is best done through the second space
21. Which of the following is NOT true of the intercostal nerve
- a. The collateral branch is largely motor
 - b. The dorsal rami supplies the muscles of the back
 - c. Is the most superior of the structures in the subcostal groove
 - d. Crossed the costo-transverse joint where it is easily anaesthetized
22. Which of the following is NOT True about the Triangle of safety
- a. Is the best site for thoracocentesis
 - b. The inferior boundary is lower on the right than the left
 - c. Anterior boundary avoids large chest wall muscles
 - d. Long thoracic nerve is posterior to the posterior boundary

23. Which does NOT describe features of cervical rib
- Parts of it are non-osseous
 - May lead to ischaemia in the upper limb
 - Associated with neural symptoms especially in the hand
 - Is crossed in part by axillary artery
24. The following are correctly matched EXCEPT
- Hemothorax-----blood
 - Chylothorax.....pus
 - Pyothorax.....pus
 - Pneumothorax.....air
25. Which of the following structures is NOT supplied by internal thoracic artery
- Pericardium
 - Pleura
 - Heart
 - Sternum and diaphragm
26. Which of the following is NOT true about thoracic ribs and respiration
- Obliquity is important in increasing transverse chest expansion
 - Fracture of the ribs is likely to occur in the upper group than the middle
 - Floating ribs do not contribute to chest wall expansion
 - The second rib is found at the angle of Louis
27. Identify the incorrect match
- Left hypochondriac – Spleen
 - Right hypochondriac – Liver
 - Suprapubic – Kidney
 - Right inguinal – appendix
28. Which of the following is not a part of the stomach
- 1st part
 - Antrum
 - Fundus
 - Pylorus
29. Which testicular cell produces testosterone
- Leydig
 - Sertoli
 - Myoid
 - Spermatozoa
30. Parts of the fallopian tube include all the following EXCEPT
- Interstitial
 - Antrum
 - Infundibulum
 - Ampula