



**AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF MEDICAL SCIENCES
DEPARTMENT OF NURSING & MIDWIFERY SCIENCES
END OF SEMESTER MAY- AUGUST 2024 EXAMINATIONS**

COURSE CODE AND TITLE: BSN 112: HUMAN ANATOMY I / BSM 112: HUMAN ANATOMY I

DATE: Monday 12th August 2024

Duration: 2 HOURS

Start: 9:00 AM

Finish: 11:00 AM

INSTRUCTIONS

1. This exam is out of 70 marks
2. This Examination comprises THREE Sections. Section I: Multiple Choice Questions (20 marks) Section II: Short Answer Questions (30 marks) and Section III: Long Answer Questions (20 marks)
3. Answer ALL Questions.
4. Do Not write anything on the question paper -use the back of your booklet for rough work if need be.

SECTION I: MULTIPLE CHOICE QUESTIONS (MCQs)**(20 MARKS)**

1. The initial morphological change preparatory to gastrulation is: -
 - A. Formation of the prechordal plate
 - B. Migration of laterally placed ectoderm cells toward the midline
 - C. Formation of the primitive streak
 - D. Formation of the notochordal process

2. The structure that eventually becomes the anal canal is: -
 - A. Stomodeum
 - B. Primitive streak
 - C. Prenotochordal cells
 - D. Proctodeum

3. Bleeding that may occur near the 13th day of human development: -
 - A. Represents a shedding of uterine tissue
 - B. Is caused by increased blood flow into lacunar spaces
 - C. Is not normal
 - D. Represents a spontaneous abortion

4. Primordial germ cells migrate to the gonads from the: -
 - A. Intermediate mesoderm
 - B. Wall of the yolk sac
 - C. Lateral plate mesoderm
 - D. Endoderm of the bilaminar disc

5. The primitive uteroplacental circulation occurs: -
 - A. By the end of second week
 - B. At the beginning of first week
 - C. During third week
 - D. At beginning of the fifth week

6. Concerning the gut: -
 - A. Maintains a connection with the yolk sac via the allantoic duct
 - B. Assists in the cephalocaudal folding of the embryo
 - C. Is derived from the mesoderm germ layer
 - D. Is bounded by the buccopharyngeal membrane cranially and the cloacal membrane caudally

7. Tarsal bones include: -
 - A. Scaphoid
 - B. Lunate
 - C. Triquetrum
 - D. Cuboid

8. The statement that best describes the posterior compartment of the thigh is: -
- A. The common origin for the posterior thigh muscles (hamstrings) is the ischial spine
 - B. Adductor magnus is a muscle of the posterior compartment
 - C. All the hamstring muscles are innervated by the obturator nerve
 - D. Both head of biceps femoris take origin from the pelvis
9. The true statement about the tibia and fibula is: -
- A. The medial tibial condyle is smaller and more circular than the lateral
 - B. Sartorius, gracilis and semitendinosus insert into the tibia
 - C. Popliteus arises below the soleal line
 - D. The common fibular nerve is subcutaneous at the neck of the fibula
10. The hypothalamus is a part of the: -
- A. Diencephalon
 - B. Mesencephalon
 - C. Myelencephalon
 - D. Telencephalon
11. Concerning the development of the central nervous system: -
- A. The cranial neuro pore closes by day 20
 - B. The caudal neuro pore closes by day 28
 - C. Failure of closure of the cranial neuro pore results in spina bifida
 - D. Failure of closure of the caudal neuro pore results in anencephaly
12. The foramen of Magendie connects: -
- A. The lateral ventricles
 - B. Third and fourth ventricles
 - C. Fourth ventricle and subarachnoid space
 - D. Fourth ventricle and the central canal
13. Regarding spinal nerve roots: -
- A. Unite to form spinal nerves in the vertebral canal
 - B. They contain postganglionic fibers of the autonomic system
 - C. Comprise of a lateral and medial root
 - D. Are sheathed by a pia-glial membrane
14. The primary visual area (Brodmann's area 17) is located in: -
- A. Occipital lobe
 - B. Parietal lobe
 - C. Frontal lobe
 - D. Temporal lobe
15. The Edinger Westphal nucleus sends preganglionic fibers to: -
- A. Otic ganglion
 - B. Pterygopalatine ganglion
 - C. Ciliary ganglion
 - D. Superior cervical ganglion

16. The basilar artery: -
- A. Is formed at the superior border of the pons
 - B. Ends at inferior border of the pons
 - C. Is formed by junction of 2 vertebral arteries
 - D. Is formed by internal carotid artery
17. The structure that is buried deep in the lateral fissure: -
- A. Cingulate gyrus
 - B. Thalamus
 - C. Third ventricle
 - D. Insula
18. Pain temperature pathway: -
- A. Has nerve fibers that constitute the lateral spinothalamic tract
 - B. Has nerve fibers that constitute the lateral cortico- spinal tract
 - C. Has fibers that course in the posterior funiculus
 - D. Has fibers that cross at once and course in the anterolateral system
19. The congenital defect that is the direct outcome of malformation of the spiral partitioning of the conus cordis and truncus arteriosus is: -
- A. Double aortic arch
 - B. Transposition of the great vessels
 - C. Patent foramen ovale
 - D. Ventricular septal defect (VSD)
20. A 14-year-old girl is having difficulty swallowing. Her case history reveals she has mitral valve stenosis related to rheumatic fever. The structure that is most likely compressing the esophagus is: -
- A. Right atrium
 - B. Left atrium
 - C. Arch of the aorta
 - D. Pulmonary trunk

SECTION II: SHORT ANSWER QUESTIONS (SAQs)**(30 MARKS)**

1. Outline FIVE (5) stages in the process of oogenesis **(5 marks)**
2. Describe five (5) types of synovial joints and a location of each. **(5 marks)**
3. Describe five (5) types of muscles located in the anterior forearm. **(5 marks)**
4. Describe the superficial venous drainage of the lower limb and one clinical correlate. **(5 marks)**
5. State five (5) congenital heart diseases that would present with primary cyanosis at the time of birth. **(5 marks)**
6. Outline five (5) stages in the development of the lungs **(5 marks)**

SECTION III: LONG ANSWER QUESTIONS (LAQs)**20 MARKS**

1. Discuss embryology under the following headings:
 - a) Four (4) events of the 2nd week of intra uterine development. **(8 marks)**
 - b) Three (3) events in 3rd week of embryonic development. **(6 marks)**
 - c) Describe three (3) clinical disorders that may occur due to improper cerebral cortex functioning. Link the disorder to the affected part of the cerebral cortex. **(6 marks)**