



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

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

**DATE: 12-8-2024**

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 phase of mitosis in which the sister chromatids separate and move toward opposite poles is
  - A. Prophase
  - B. Metaphase
  - C. Anaphase
  - D. Telophase
  
2. Which of the following is not a type of simple epithelial tissue?
  - A. Squamous epithelium
  - B. Cuboidal epithelium
  - C. Columnar epithelium
  - D. Stratified epithelium
  - E. Ciliated epithelium
  
3. The inner lining of the esophagus is made up of:
  - A. Stratified columnar epithelium
  - B. Stratified squamous epithelium
  - C. Glandular epithelium
  - D. Simple columnar epithelium with microvilli
  - E. Masticatory epithelium
  
4. What attaches the skeletal muscle to bone?
  - A. Cartilage
  - B. Tendons
  - C. Ligaments
  - D. Joints
  - E. Muscle
  
5. Regarding oogenesis and spermatogenesis
  - A. Both completed within the gonads
  - B. Both involve mitotic cell divisions
  - C. Both produce the same number of viable gametes
  - D. Oogenesis produces a smaller gamete
  - E. Spermatogenesis produces one polar body
  
6. The primary site of implantation
  - A. Cervix
  - B. Ovary
  - C. Fallopian tube
  - D. Uterus

7. The hormone produced by the syncytiotrophoblast is
- A. Oestrogen
  - B. Progesterone
  - C. Human chorionic gonadotropin (hCG)
  - D. Follicle-stimulating hormone (FSH)
  - E. Luteinizing hormone (LH)
8. Monozygotic twins are best described as
- A. Twins that develop from two eggs fertilized by two sperms
  - B. Twins that always share the same placenta and amniotic sac
  - C. Twins that share 100% of their genetic material
  - D. Twins that are always of different sexes
  - E. Twins that result from the splitting of a fertilized egg after day 12 of embryonic development
9. The investigation not recommended during pregnancy is
- A. Urinalysis
  - B. CT scan
  - C. MRI scan
  - D. Ultrasonography
  - E. Full hemogram
10. The function of sebaceous glands is to produce:
- A. Sweat
  - B. Sebum
  - C. Keratin
  - D. Melanin
  - E. Collagen
11. The reticular dermis is composed of which one of the following connective tissue types?
- A. Dense regular
  - B. Dense irregular
  - C. Loose
  - D. Mucous
  - E. Mesenchyme

12. Which one of the following cells is incorrectly matched with its function?
- A. Keratinocyte- Protective lining
  - B. Langerhan cell- Immune
  - C. Merkel's cell- mechanoreceptive
  - D. Fibroblast- stem cells
  - E. Melanocytes- melanin synthesis
13. The neuroglial cells responsible for myelination in the spinal cord
- A. Astrocytes
  - B. Schwann cells
  - C. Microglial cells
  - D. Ependymal cells
  - E. Oligodendrocytes
14. Which one of the following cell types is responsible for bone resorption?
- A. Osteoprogenitor cells
  - B. Osteocytes
  - C. Osteoblasts
  - D. Osteoclasts
  - E. Fibroblasts
15. Which one of the following is not a specialized connective tissue?
- A. Cartilage
  - B. Dense regular connective tissue
  - C. Bone
  - D. Adipose tissue
  - E. Blood
16. Which lobe of the cerebrum is correctly matched with its role?
- A. Parietal lobe- motor
  - B. Temporal lobe- memory
  - C. Occipital lobe- olfaction
  - D. Frontal lobe- vision
  - E. Frontal lobe- sensory
17. Which one of the following is part of the respiratory portion of the airway?
- A. Principal bronchus
  - B. Tertiary bronchus
  - C. Respiratory bronchus
  - D. Terminal bronchus
  - E. Trachea

18. True about the changes that occur along the airway?
- A. Cartilage disintegrates
  - B. Epithelium becomes simplified
  - C. Mucous glands increase
  - D. Diameter decreases
  - E. The size of blood vessels remains the same
19. The placental anomaly characterized by obstruction of cervical canal opening is called?
- A. Placenta previa
  - B. Placenta accreta
  - C. Placenta percreta
  - D. Ectopic pregnancy
  - E. Placenta increta
20. Which of the following bones is not part of the axial skeleton?
- A. Skull
  - B. Ribs
  - C. Femur
  - D. Vertebrae
  - E. Sternum
21. The hamstring muscles are located on which part of the body?
- A. Anterior thigh
  - B. Posterior thigh
  - C. Anterior arm
  - D. Posterior arm
  - E. Lateral thigh
22. What type of joint is the shoulder joint?
- A. Hinge joint
  - B. Ball and socket joint
  - C. Saddle joint
  - D. Pivot joint
  - E. Gliding joint
23. Which chamber of the heart pumps oxygenated blood to the systemic circulation?
- A. Right atrium
  - B. Left atrium
  - C. Right ventricle
  - D. Left ventricle
  - E. Coronary sinus

24. The valve located between the left atrium and the left ventricle is called the:
- A. Tricuspid valve
  - B. Pulmonary valve
  - C. Mitral valve
  - D. Aortic valve
  - E. Semilunar valve
25. The structure that separates the two ventricles of the heart is called the:
- A. Interatrial septum
  - B. Interventricular septum
  - C. Coronary sulcus
  - D. Myocardium
  - E. Endocardium
26. The somatic nervous system controls:
- A. Voluntary muscle movements
  - B. Involuntary muscle movements
  - C. Hormonal secretion
  - D. Sensory information processing
  - E. Blood pressure regulation
27. Which of the following cranial nerves is primarily responsible for vision?
- A. Optic nerve
  - B. Vagus nerve
  - C. Trigeminal nerve
  - D. Facial nerve
  - E. Glossopharyngeal nerve
28. Which part of the neuron receives incoming signals from other neurons?
- A. Dendrites
  - B. Axon
  - C. Myelin sheath
  - D. Soma
  - E. Synapse
29. Which of the following is the main function of the myelin sheath in neurons?
- A. Increases the speed of nerve impulse transmission
  - B. Produces neurotransmitters
  - C. Provides nutrients to the neuron
  - D. Regulates the exchange of ions
  - E. Acts as a receptor for neurotransmitters

30. The pacemaker of the heart is the:

- A. Atrioventricular (AV) node
- B. Bundle of His
- C. Purkinje fibers
- D. Sinoatrial (SA) node
- E. Left bundle branch

### **SHORT ANSWER QUESTIONS**

- 31. Using a well-labeled diagram, illustrate the hierarchy of organization of the human body, giving an example for each level (10 marks)
- 32. Name three (3) generalized and two (2) specialized connective tissues, and give one (1) example for each (10 marks)
- 33. Using a well-labeled diagram, illustrate the conducting and respiratory portions of the airway (10 marks)
- 34. Outline the main types of joints in the body, and state two (2) examples for each (10 marks)
- 35. Outline the differences between oogenesis and spermatogenesis (10 marks)
- 36. Name the three (3) layers of the trilaminar disc, and state 2 derivatives of each (10 marks)
- 37. Name five (5) major arteries of the human body and state their area of distribution (10 marks)

