



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972-60200 – Meru-Kenya.

Tel: +254 (0)799529958, +254 (0)799529959, +254 (0)712524293

Website: www.must.ac.ke Email: info@must.ac.ke

UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE IN
NURSING

NND 3111/NNU 3111: HUMAN ANATOMY 1

DATE: DECEMBER 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer all questions in the booklet provided

Ensure that all your answers are properly numbered

Section One: Multiple Choice Questions (MCQs): Write the correct answer on the space provided in the answer booklet. Each MCQ is one mark.

Section Two: Short Answer Questions – Answer questions following each other on the answer booklet

Section Three: Long Answer Questions – Answer the questions on the answer booklet

All questions are compulsory

SECTION A: 20 MARKS

PICK THE MOST APPROPRIATE ANSWER

1. The frontal plane divides the body into
 - a) Into right and left sections
 - b) Into equal right and left halves
 - c) Into upper and lower sections
 - d) Into anterior and sections

 2. The movement that occurs when the angle between two bone decreases is known as
 - a) Flexion
 - b) Extension
-

- c) Abduction
 - d) Adduction
3. The movement of the foot that occurs when the sole of the foot is turned outward is known as
- a) Inversion
 - b) Eversion
 - c) Plantarflexion
 - d) Dorsiflexion
4. The cellular organelle associated with Kartagener syndrome is the
- a) Peroxisome
 - b) Mitochondria
 - c) Lysosome
 - d) Cilia
5. Which of the following syndrome resulted from nondisjunction of sex chromosome during meiotic cell division?
- a) Down syndrome
 - b) Turners syndrome
 - c) Edwards syndrome
 - d) Angelman's syndrome
6. The time required for a spermatogonium to develop into a mature spermatozoon is approximately
- a) 64 days
 - b) 74 days
 - c) 84 days
 - d) 94 days
7. The process that allows the spermatozoon to penetrate the corona radiata and the zona pellucida during fertilization is known as
- a) Acrosomal reaction
 - b) Zonal reaction
 - c) Decidual reaction
 - d) Crossing over

8. The part of the decidua deep to the conceptus that forms the maternal part of the placenta is known as
- Decidual parietalis
 - Decidual basalis
 - Decidual capsularis
 - Decidual internal
9. Which of the following is not a function of the amniotic fluid?
- Cushions the embryo and fetus against injuries
 - Permits normal fetal lung development
 - Permit normal fetal brain development
 - Prevents adherence of the amnion to the embryo and fetus
10. The fetal part of the placenta is formed by the
- Villous chorion
 - Amniotic membrane
 - Yolk sac
 - Mesoderm
11. Oxygen, carbon dioxide, and carbon monoxide cross the placental membrane by
- Simple diffusion
 - Facilitated diffusion
 - Active transport
 - Pinocytosis.
12. When the placenta grows completely through the wall of the uterus, the resulting anomaly is called
- Placenta previa
 - Placenta accreta
 - Placenta increta
 - Placenta percreta
13. Which of the following is an example of a ball and socket synovial joint?
- Knee joint
 - Ankle joint
 - Shoulder joint
 - metacarpophalangeal joint

14. Capillaries found in the bone marrow are examples of _____ capillaries
- a) Continuous capillaries
 - b) Fenestrated capillaries
 - c) Sinusoidal capillaries
 - d) Straight capillaries
15. The subclavian artery continues as the _____ after passing the lateral border of the first rib.
- a) Brachial artery
 - b) Axillary artery
 - c) Radial artery
 - d) Descending aorta
16. Where is the myocardium the thickest?
- a) Right atria
 - b) Left atria
 - c) Right ventricle
 - d) Left ventricle
17. Which of the following does not open to the right atrium?
- a) Superior venacava
 - b) Right and left pulmonary veins
 - c) Coronary sinus
 - d) Inferior venacava
18. The sinoatrial node is located close to the opening of the?
- a) Inferior venacava
 - b) Pulmonary trunk
 - c) Aortic arch
 - d) Superior venacava
19. The lymphatic tissue in the spleen called?
- a) White matter
 - b) Lymph follicles
 - c) Payers patches
 - d) Diffuse lymphatic tissue

20. Which of the following formed element do not contain a nucleus?

- a. Platelets
- b. Erythrocytes
- c. Leukocytes
- d. Monocytes

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS)

1. (a) What is cell specialization? (1 mark)
(b) State four examples of specialized cells and state the specialization of each. (4 marks)
2. Describe the activities occurring at the interphase phase of the cell cycle. (6 marks)
3. Concerning autosomal recessive disorder
 - i. Describe its pattern of inheritance. (4 marks)
 - ii. State two common examples. (2 marks)
4. Describe the process of spermiogenesis. (6 marks)
5. Explain six results of fertilization. (6 marks)
6. Describe the derivatives of the mesoderm. (8 marks)
7. Describe the histological organization of the hyaline cartilage and state two examples. (3 marks)

SECTION C: LONG ANSWER QUESTIONS (40 MARKS)

- a) For the purpose of venepuncture and other clinical procedures describe the origin, course, tributaries and termination of the main superficial veins of the upper and lower limbs (20 marks)
- b) Concerning the respiratory system.
 - i. With the aid of a diagram describe the respiratory membrane and state its function. (6 marks)
 - ii. State six gross anatomic differences between the right and left lungs. (6 marks)
 - iii. Describe the bronchial tree. (4 marks)
 - iv. State the differences between the right and left main bronchi. Add an associated clinical correlate. (4 marks)