



UNIVERSITY EXAMINATIONS 2025/2026

END OF TERM EXAMINATIONS FOR

THE BACHELOR OF SCIENCE IN MIDWIFERY

UNIT CODE and title: BSN 112 Human Anatomy I

DATE: 5TH AUGUST 2026

TIME: 2 hours

READ INSTRUCTIONS CAREFULLY

1. The examination paper has THREE (3) sections. (Total 70 Marks)
 - a. Answer ALL questions in sections A, B and C
2. Write your college number on all sheets of paper used
3. SECTION I: Multiple Choice Questions. (20 Marks)
4. SECTION II: Short Answer Questions. (30 Marks)
5. SECTION III: Long Answer Questions. (20 Marks)

SECTION I: Multiple Choice Questions.

(20 Marks)

1. A nurse is preparing to assess a patient and positions them in the anatomical position. Which of the following descriptions correctly defines this position and helps ensure consistency in physical assessments?
 - a) Standing erect, facing forward, arms at the sides with palms facing forward, and feet slightly apart
 - b) Lying on the back with knees bent and feet flat on the bed
 - c) Sitting upright with arms crossed and head turned to the side
 - d) Standing erect, facing backward, arms raised above the head, palms inward
2. During patient education, a nurse explains that mitochondria in cells are crucial because they:
 - a) Store genetic material for inheritance
 - b) Produce hormones like insulin and cortisol
 - c) Generate energy required for cell functions through ATP production
 - d) Detoxify harmful substances in the bloodstream
3. When administering an intramuscular injection in the deltoid muscle, a nurse palpates the acromion process and injects 2-3 fingerbreadths below it to avoid which of the following complications?
 - a) Damage to the femoral nerve
 - b) Injury to the axillary nerve
 - c) Piercing the carotid artery
 - d) Fracture of the ulna
4. Which embryonic germ layer gives rise to structures such as the epidermis, nervous system, and tooth enamel?
 - a) Mesoderm
 - b) Ectoderm
 - c) Endoderm
 - d) Trophoblast

5. A mother's intake of folic acid during early pregnancy helps prevent neural tube defects. This prevention is most effective during which period?
- a) First 24 hours post-conception
 - b) First 3 weeks of development
 - c) Third trimester
 - d) After birth
6. A patient reports shoulder pain when abducting the arm beyond 90 degrees. This motion primarily involves which muscle?
- a. Supraspinatus
 - b. Pectoralis major
 - c. Latissimus dorsi
 - d. Trapezius
7. The protein responsible for the waterproofing and protective function of the epidermis is:
- a) Collagen
 - b) Elastin
 - c) Keratin
 - d) Melanin
8. The layer of connective tissue that surrounds individual nerve fibers within a peripheral nerve is called the:
- a) Epineurium
 - b) Endoneurium
 - c) Perineurium
 - d) Myelin sheath
9. Select the false statement about the serratus anterior muscle:
- a) It arises by 8 digitations from upper eight ribs
 - b) It is inserted into the costal surface of scapula along its Lateral border
 - c) Its supplied by long thoracic nerve
 - d) It is the chief protractor of the scapula

10. A 12-year-old boy is diagnosed with an upper brachial plexus injury after falling from a tree. He presents with his right upper arm at his side due to loss of abduction. Which of the following muscles are primarily responsible for abduction of the arm at the shoulder?
- a) Deltoid and biceps brachii
 - b) Deltoid and supraspinatus
 - c) Deltoid and infraspinatus
 - d) Supraspinatus and infraspinatus
11. The type of joint that is the shoulder joint is: -
- a) Hinge joint
 - b) Ball and socket joint
 - c) Saddle joint
 - d) Pivot joint
12. The chamber of the heart that pumps oxygenated blood to the systemic circulation is: -
- a) Right atrium
 - b) Left atrium
 - c) Right ventricle
 - d) Left ventricle
13. The structure that separates the two ventricles of the heart is the:
- a) Interatrial septum
 - b) Interventricular septum
 - c) Coronary sulcus
 - d) Myocardium
14. The somatic nervous system controls: -
- a) Voluntary muscle movements
 - b) Involuntary muscle movements
 - c) Hormonal secretion
 - d) Sensory information processing

15. The pacemaker of the heart is the: -

- a) Atrioventricular (AV) node
- b) Bundle of His
- c) Purkinje fibers
- d) Sinoatrial (SA) node

16. Microvilli are the major structures that are affected in protein losing enteropathy. They are a characteristic feature of:

- a) Secretary cells
- b) Neurotransmitter cells
- c) Absorptive cells
- d) Fibroblasts

17. A medical student who has chronic lower respiratory infections seeks the advice of an ear nose and throat specialist. A biopsy from the student's respiratory epithelium reveals alterations in certain epithelial structures. This patient most likely has abnormal:

- a. Microvilli
- b. Desmosomes
- c. Cilia
- d. Hemidesmosomes

18. With regard to the coronary arteries

- a) Right arises from the posterior coronary sinus
- b) Left supplies the conducting system in most patients
- c) Right supplies the posterior descending branch in most patients
- d) There are no arteriolar anastomoses between left and right

19. Regarding bronchopulmonary segments, which is describe the right lung?

- a) There are approximately 10 segments in each lung
- b) The lingual is divided into upper and lower segments
- c) There are 8-9 segments
- d) Has its own veins

20. All are contents of superior mediastinum *except*:

- a) Arch of aorta
- b) Pulmonary trunk
- c) Superior vena cava
- d) Brachiocephalic trunk

SECTION II: Short Answer Questions

(30 Marks)

1. Outline the levels of structural organization in the human body, and give a brief example of each. (5 Marks).
2. Describe the layers of the epidermis and explain the function of each layer (5 Marks).
3. Discuss the pathway for taste sensation from the tongue to the brain (5 Marks).
4. Describe the internal features of right atrium (5 Marks)
5. Outline the gross characteristic of bronchopulmonary segment (5 Marks)
6. Outline the classification of joints in the human body citing examples (5 marks)

1.

SECTION III: Long Answer Questions

(20 Marks)

1. A 2-day-old male neonate, born at term via spontaneous vaginal delivery, presents to the neonatal unit with difficulty in breathing, excessive salivation, and recurrent coughing during feeding. Tracheoesophageal fistula with esophageal atresia (most likely Type C – proximal esophageal atresia with distal TEF). Describe the development of the respiratory system, citing how the condition occurred (10 marks)
2. A 6-month-old female infant is brought to the pediatric clinic by her mother, who reports episodes of sudden bluish discoloration of the lips and fingers, especially during crying or feeding. Describe the atrial septation process (10 marks)