



FACULTY OF ALLIED HEALTH SCIENCES, UNIVERSITY OF RUHUNA
Department of Nursing
1st End Semester Examination – 2026 – 2023/2024 (17th) Batch
New Curriculum
NUR 1112 - Anatomy I- SEQ

Date: 21st July 2026

Time: 1.00 p.m. - 2.00 p.m.

Duration: 1 hour

Index Number:

Answer all questions using the given space.

1.

1.1. Cells undergo regulated processes of growth and division to maintain the normal functioning of living organisms.

1.1.1. Define the cell cycle. (05 marks)

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1.1.2. State two (02) key events that occur during interphase of the cell cycle. (10 marks)

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1.1.3. State two (02) key features of meiosis that are not seen in mitosis. (10 marks)

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1.2. Genetic traits are determined by combinations of alleles inherited from both parents, and their transmission follows specific inheritance patterns.

1.2.1. A gene controlling eye colour has two alleles: B for brown eyes (dominant) and b for blue eyes (recessive). Using this information, define the terms “**homozygous**” and “**heterozygous**”, giving appropriate genotypic examples. (25 marks)

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1.2.2. State why hemophilia A is not transmitted directly from an affected father to son. (15 marks)

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1.3. Early embryonic development involves a series of organised changes that transform the early cell mass into a structured embryo with distinct layers.

1.3.1. Define the morula and blastocyst.

(10 marks)

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1.3.2. Briefly describe the process of gastrulation.

(25 marks)

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2.

2.1. The human respiratory system is specialized for efficient gas exchange and includes various structures and adaptations that facilitate breathing.

2.1.1. List the components of the respiratory zone of the respiratory tract. (10 marks)

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2.1.2. State two (02) adaptations of the trachea for its function. (10 marks)

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2.1.3. Define hemothorax and pleural effusion. (10 marks)

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2.1.4. A premature newborn presents with severe breathing difficulty soon after birth.

a. What is the most likely disease condition? (05 marks)

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b. State the embryological developmental basis behind the condition.

(15 marks)

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2.2. The gastrointestinal system is responsible for the digestion, absorption, and transport of nutrients.

2.2.1. List the layers of the anterior abdominal wall.

(15 marks)

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2.2.2. State **two (02)** anatomical adaptations of the small intestine for its function.

(10 marks)

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2.2.3 List the components of hepatobiliary system.

(10 marks)

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2.2.4 A newborn baby is admitted to the neonatal unit shortly after birth. The baby has not passed meconium within the first 24 hours and has progressive abdominal distension. On physical examination, no anal opening is visible.

a. What is the most likely diagnosis?

(05 marks)

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b. State the embryological basis of this condition.

(10 marks)

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