



FACULTY OF ALLIED HEALTH SCIENCES, UNIVERSITY OF RUHUNA

Department of Nursing

1st End Semester Examination – 2025 – 2022/2023 (16th) Batch

New Curriculum

NUR 1122 – Physiology I – SEQ

Library Copy

Date: 08th May 2025

Time: 2.30 p.m. – 3.30 p.m.

Duration: 1 hour

Index Number: .....

Answer all questions. Use the given space for the answers

1.

1.1. A 24-year-old woman presents with excessive bleeding following a minor dental procedure. She has no previous history of prolonged bleeding. On examination, there are multiple small bruises on her limbs. A blood test shows a prolonged bleeding time.

1.1.1. Define haemostasis. (05 marks)

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1.1.2. List the three (03) main stages of haemostasis. (15 marks)

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1.1.3. What is the role of platelets in the haemostatic process. (10 marks)

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1.1.4. What is the function of von Willebrand factor in platelet adhesion? (10 marks)

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1.1.5. Name the common pathway factor that converts fibrinogen to fibrin. (05 marks)

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1.1.6. Mention two (02) natural anticoagulants in the body. (05 marks)

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1.1.7. Write two (02) investigations which can be used to diagnose the above condition. (05 marks)

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1.2. You are observing a patient with a stethoscope and notice the characteristic "lub-dub" heart sounds. As a nursing student, you're required to understand the mechanical and electrical events of the cardiac cycle to interpret what you're hearing and monitor vital signs effectively.

1.2.1. Define the cardiac cycle. (05 marks)

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1.2.2. List the four (04) main phases of the cardiac cycle. (10 marks)

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1.2.3. What causes the "lub" and "dub" heart sounds? (05 marks)

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1.2.4. List the five (05) components of the electrical conduction system of the heart. (10 marks)

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1.2.5. Illustrate the normal Electrocardiogram wave form in the sinus rhythm and mention the phases of the cardiac cycle represent by the three (03) waves and the two (02) intervals.

(15 marks)

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2.

2.1. A patient visits the clinic complaining of a dry mouth and difficulty swallowing food. Upon examination, the doctor notes reduced salivary secretion. As a nursing student, you're expected to understand the physiology of the mouth and saliva to assist in clinical assessments and patient education.

2.1.1. List four (04) major components of saliva. (10 marks)

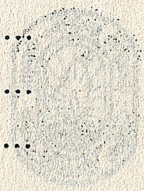
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2.1.2. List five (05) functions of saliva. (10 marks)

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2.1.3. Outline the regulation of saliva secretion. (25 marks)

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2.1.4. Mention two (02) disease conditions associated with secretion of saliva. (05 marks)

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2.2. A patient presents with the symptoms of steatorrhea. The physician suspects a disorder affecting digestive secretions from the pancreas and liver. As a nursing student, you are expected to understand the exocrine functions of these organs and their role in digestion.

2.2.1. Name the two (02) main digestive enzymes secreted by the exocrine pancreas: (05 marks)

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2.2.2. What is the role of bicarbonate in pancreatic juice? (05 marks)

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2.2.3. Outline the process of activation of pancreatic proteolytic enzymes in the small intestine. (12 marks)

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2.2.4. List five (05) components of bile? (10 marks)

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2.2.5. What are the characteristics of stools which can be seen in steatorrhea? (03 marks)

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2.2.6. Outline how a deficiency in bile or pancreatic enzymes can lead to steatorrhea. (15 marks)

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