



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

FIRST YEAR SECOND TRIMESTER EXAMINATIONS

FOR THE DEGREE

OF

**MASTER OF SCIENCE IN ADVANCED NURSING
PRACTICE**

COURSE CODE: NCN 8121

COURSE TITLE: ADVANCED PATHOPHYSIOLOGY

DATE: 25TH APRIL 2022 TIME: 8.00 A.M-11 AM

INSTRUCTIONS TO CANDIDATES

- (i) WRITE YOUR UNIVERSITY REGISTRATION NUMBER ON EVERY PIECE OF PAPER YOU USE.
- (ii) DO NOT WRITE YOUR NAME ON ANY PIECE OF PAPER YOU USE.
- (iii) THIS PAPER CONSISTS OF FIVE (5) LONG ANSWER QUESTIONS (LAQS)

- (iv) ATTEMPT ALL QUESTIONS
- (v) READ THE INSTRUCTIONS CAREFULLY

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

LONG ANSWER QUESTIONS (20 marks each)

Advanced pathophysiology knowledge empowers nurses to evaluate a patient's health status in a comprehensive fashion and identify early stages of disease, recognize the signs of disease progression and intervene in a timely and c appropriately. Apply your knowledge of advanced pathophysiology to respond to the following questions:

1. A 60-year-old woman with a heavy smoking history presents with chronic productive cough that has been present for three consecutive months over the past two consecutive years. On physical examination, her skin has a bluish tinge and she is overweight.
The patient is diagnosed with chronic bronchitis. Discuss the pathogenesis and pathophysiology of this condition (20 marks)
2. A 35-year-old female recovering from hepatitis B develops hematuria, proteinuria, and red cell casts in the urine. Discuss the pathophysiology of acute kidney injury (20 marks)
3. THE IMPORTANCE of ischemia in human disease makes understanding of the mechanisms whereby it produces irreversible cell injury of considerable interest.
 - a. Discuss the pathogenesis of irreversible cell injury induced by hypoxia/ischemia. (10 marks)
 - b Explain the etiology and pathogenesis of Necrosis (10 marks)
4. 56-year-old man reports reduced exercise tolerance over the past 5 years. In the past year he has noted chest pain after ascending stairs. He smokes 2 packs of cigarettes per day. On examination he has a blood pressure of 150/90 mm Hg. His body mass index is 30. Laboratory findings include total serum cholesterol of 245 mg/dL with an HDL cholesterol of 22 mg/dL

- a. Explain the pathogenesis involved in Atherosclerosis (10 marks)
 - b. Discuss the pathogenesis of essential hypertension. (10 marks)
5. As a nurse providing care to a patient with peptic ulcer disease, it is important to know the sign pathophysiology, medications, nursing management, diet education, and complications.
- a. Discuss the pathogenesis of peptic ulcer disease (10 marks)
 - b. Explain the pathogenesis of diabetes mellitus. (10 marks)

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