



(University of Choice)

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

SCHOOL OF NURSING MIDWIFERY AND PARAMEDICAL SCIENCES

MAIN CAMPUS

**END OF FIRST TRIMESTER EXAMS
2023/2024 ACADEMIC YEAR**

**FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING
(TRAUMA AND EMERGENCY)**

COURSE CODE: NCT 8211

COURSE TITLE: SHOCK AND HEMORRHAGE MANAGEMENT

DATE: 13 / 12 / 2023

TIME: 8.00- 11.00 AM

INSTRUCTIONS TO CANDIDATES

ALL QUESTIONS ARE COMPULSORY

DURATION: 3 HOURS

MMUST OBSERVES ZERO TOLERANCE TO EXAMINATION CHEATING

Instructions: Answer all questions

1. Mr. H 65 years old male is brought to the emergency department by Paramedics following an acute anterolateral myocardial infarction. The patient is unconscious with a BP of 80/44, HR 120, PCO₂ 48, HCO₃ 28.
 - a. Explain five key assessment findings that would indicate the patient is in cardiogenic shock (10 marks)
 - b. Explain the cellular metabolism that is consistent with the physiologic parameters in this patient (5 marks)
 - c. Outline the pharmacologic therapies anticipated for Mr. H management (5 marks)

2. Mrs. J, 57 years old female has recently become lethargic and anorexic for the past week. She complains of nonspecific lower abdominal pain unrelated to food or bowel movements. She stopped taking Bactrim prescribed 3 days ago for urinary tract infection due to nausea. Patient is confused, has chills and petechiae.
 - a. Which type of shock is the patient presenting with? Explain (5 marks)
 - b. Outline the clinical presentation and related assessment finding for this type of shock apart from what Mrs. J presents with. (5 marks)
 - c. Describe the immediate management of Mrs. J within the first 1 hour (10 marks)

3. James, 40 years old truck driver is involved in motor vehicle crash sustaining injury to the femoral artery. The paramedics arrive at scene within 5 mins and assess the patient. The findings are: Patient alert, BP 110/ 70; HR 100; RR 18. The patient arrives at the emergency department brought by an ambulance and assessment conducted within 30 mins of injury with the following findings: BP 80/60; HR 140; RR 10 and the patient is unconscious.
 - a. Explain the significance of sympathetic nervous reflex in the variation of the patient's assessment findings (6 marks)
 - b. Describe the sympathetic reflex compensation in shock responsible for variation in the patient's assessment findings (14 marks)

4. Most common causes of circulatory shock is trauma to the body from ensuing hemorrhage. However, shock can still occur in absence of hemorrhage.
 - a. Explain hypovolemic shock caused by trauma in the absence of hemorrhage (5 marks)
 - b. Describe the three (3) physiological causes of circulatory shock with or without alteration in cardiac output (15 marks)

5. A 24 years old male is brought to the emergency department following an assault by a friend. The patient was hit by a blunt object in the abdomen. He is agitated, tachypneic and hypotensive. A FAST exam reveals Class 4 hemorrhage and patient requires urgent volume replacement.
 - a. Describe the volume replacement resuscitation you will perform to the patient (10 marks)
 - b. Explain the signs indicative of transfusion related acute lung injury (TRALI) in the patient and your immediate management of this transfusion complication (10 marks)