



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

MAIN CAMPUS
SCHOOL OF NURSING MIDWIFERY AND PARAMEDICAL SCIENCES

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN
PARAMEDIC SCIENCE**

COURSE CODE: NPP 226
COURSE TITLE: ADVANCED TRAUMA (BURNS)

DATE: 21ST APRIL 2022

TIME: 11:30 – 2:30 PM

INSTRUCTIONS TO CANDIDATES

All questions in the three sections (A, B and C) are compulsory
DURATION: 3 Hours

Answer all questions on the booklet provided

MMUST observes ZERO tolerance to examination cheating

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)

Choose the most appropriate answer

1. Immediate action after a person has an electrical burn is to:
 - A. Put ice on the area of contact
 - B. Cover the burned area with a blanket
 - C. Be sure the person is not in contact with electrical source
 - D. Wash the area with running water

2. In the case of a thermal burn to the skin, the immediate treatment of the affected area is to:
 - A. Wash the area with soap
 - B. Flush the area for at least 20 minutes with cool running water
 - C. Apply an ointment or butter
 - D. Cool the area with ice

3. A patient has burns on both legs, the burnt area appears white and leather like. The patient states that he has little pain. The injury should be categorized as:
 - A. Superficial
 - B. Partial thickness superficial
 - C. Partial thickness deep
 - D. Full thickness

4. The first half of the total amount of fluid needed in 24 hours should be given within:
 - A. First 24 hours after injury
 - B. First 12 hours after injury
 - C. First 4 hours after injury
 - D. First 8 hours after injury

5. The fluid that a Paramedic should administer as fluid resuscitation during the emergency phase of burn recovery is:
 - A. Colloids
 - B. Crystalloids
 - C. Fresh frozen plasma
 - D. Packed red blood cells

6. A paramedic should recognize that fluid shift in a patient with burn injury results from increase in the:
 - A. Total volume of circulating blood

- B. Total volume of intravascular plasma
 - C. Permeability of capillary walls
 - D. Permeability of kidney walls
7. The clinical manifestation that should alert a paramedic about possible carbon monoxide poisoning is
- A. Pulse oximetry reading of 80%
 - B. Expiratory stridor and nasal flaring
 - C. Cherry red color to the mucus membranes
 - D. Presence of carbonaceous particles in the sputum
8. If a chemical splash into an eye, a Paramedic Should:
- A. Let the eye tear to wash the chemical out
 - B. Cover the eye with a loose moist dressing
 - C. Use milk to flush the eye
 - D. Flash the eye with clean water
9. A long-term consequence of a full thickness burn is deficiency of:
- A. Vitamin A
 - B. Vitamin B
 - C. Vitamin C
 - D. Vitamin D
10. The first action a Paramedic should take when a patient with dressing covering the neck experiences some respiratory difficulty is to:
- A. Administer oxygen
 - B. Lessen the dressing
 - C. Notify the emergency team
 - D. Document the observation
11. On examination of a 40-year-old burned patient, the blood pressure is 90/60 mmHg with a pulse rate of 122 b/m. these findings are an expected result of -----.
- A. Fluid shift response
 - B. Intense pain response
 - C. Hemorrhage response
 - D. Carbon monoxide poisoning response
12. The main cause of death in patients with severe burns is:
- A. Pain
 - B. Fever

- C. Bacterial infection
 - D. Severe dehydration
13. Persons who are burnt on the face and neck or those who have inhaled flame, steam or smoke should be closely observed for:
- A. Possibility of cosmetic surgery
 - B. Low self esteem
 - C. Laryngospasm and airway obstruction
 - D. Risk for scarring
14. A paramedic should recognize that fluid shift in a patient with a burn injury results from increase in the-----
- A. Total volume of circulating whole blood
 - B. Total volume of intravascular plasma
 - C. Permeability of capillary walls
 - D. Permeability of kidney tubules
15. Burns commonly occurs in:
- A. Men
 - B. Women
 - C. 24 months or younger
 - D. 60 to 75 years old
16. Pain occurs more in first degree and second degree burns because of:
- A. release of high prostaglandins by brain
 - B. Nerve endings have been i exposed
 - C. Destruction of sebaceous gland
 - D. Increased perspiration
17. The clinical manifestation that indicates that escharotomy is needed on circumferential extremity burn is:
- A. The burn is full thickness rather than partial thickness
 - B. The patient is unable to fully pronate and supinate the extremity
 - C. Capillary refill is slow in the digits and distal pulse is absent
 - D. The patient cannot distinguish the sensation of sharp versus dull in the extremity
18. A paramedic should be alerted on the need to alter fluid resuscitation plan when a burned patient has the previous history of;
- A. Seasonal asthma

- B. Hepatitis B 10 years ago
 - C. Myocardial infarction 1 year ago
 - D. Kidney stones within the last 6 months
19. On assessment the patient's respiratory efforts is adequate if:
- A. The patient is able to talk
 - B. The patient is alert and oriented
 - C. The patient's oxygen saturation is 97%
 - D. The patient's chest movements are uninhibited
20. Local edema and blister formation at the burn area mainly results from:
- A. Increased production of lymph
 - B. Hypothermia
 - C. To protect the burn area from heat
 - D. Vasodilation and increased capillary permeability

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS)

Answer all questions

1. Explain five signs and symptoms of Chemical burns. (5 marks)
2. Draw a diagram, illustrating local burn injury response. (6 marks)
3. Explain four causes of burns (4 Marks)
4. Explain the classification of burns according to the rule of nine. (6 marks)
5. Explain any five principles of burnis management (5 marks)
6. Using Parklands formula, calculate the amount of fluid to be given within the first 8 hours to an adult patient weighing 80 kgs. with 25% full thickness burns. (6 marks)
7. Explain the systemic response to burn injury. (8 marks)

SECTION C: LONG ESSAY QUESTIONS (40 MARKS)

Answer all questions.

1. Describe the immediate assessment and management of an adult patient 80 kgs, with 20% full thickness electric burns. on the lower limbs. (20 marks)
2. . Describe the assessment and emergency management of a 30 years old, weighing 50 kgs, with 20% thermal burns on the trunk and lower limbs until he arrives at the burns center. (20 marks)

END