



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

MAIN CAMPUS

**UNIVERSITY SPECIAL EXAMINATIONS
2023/2024 ACADEMIC YEAR
SECOND YEAR SECOND TRIMESTER EXAMINATIONS
FOR THE DEGREE OF
BACHELOR OF SCIENCE PARAMEDICAL SCIENCES
COURSE CODE: NPP 322
TITLE: HEAD FACE NECK SPINE TRAUMA**

DATE: MONDAY, 8TH APRIL 2024

TIME: 8.00 A.M – 11.00 A.M

INSTRUCTIONS TO CANDIDATES

Answer All Questions

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQs): (20 Marks)

(Answer all the questions)

1. Battle sign' in head injury refers to:
 - A. Periorbital ecchymosis
 - B. Retroauricular ecchymosis
 - C. Intraorbital ecchymosis
 - D. Intraauricular ecchymosis
2. The level of spinal cord injury that may lead to diaphragmatic paralysis is at:
 - A. C1 and C2
 - B. C3 and C4
 - C. C4 and C5
 - D. C6 and C7
3. A patient with injury to Broca's area in the cerebral cortex is likely to exhibit:
 - A. Inability to focus
 - B. Difficulty in speech
 - C. Inability to concentrate
 - D. Loss of balance
4. Which cartilaginous ring is commonly referred to as the Adam's apple?
 - A. Cricoid
 - B. Thyroid
 - C. Hyoid
 - D. Laryngeal
5. Blowout fracture can occur if enough force is applied to the:
 - A. Mouth
 - B. Nose
 - C. Eyes
 - D. Ears
6. The cranial nerve that controls movement of the eyes is:
 - A. Ophthalmic nerve
 - B. Oculomotor nerve
 - C. Optic nerve
 - D. Facial nerve
7. A subdural hematoma is classified as acute if clinical signs and symptoms develop:
 - A. Within 24 hours following the injury.
 - B. Within 48 hours following the injury.
 - C. Within 36 hours following the injury
 - D. Immediately following the injury.

8. Ear injuries evidenced by complaints of vertigo and cannot be treated in the prehospital setting involve:
 - A. External ear
 - B. Middle ear
 - C. Inner ear
 - D. The ossicles
9. Mechanism of injury suggesting highly possible spinal injury is:
 - A. Moderate-velocity crash (less than 40 mph)
 - B. Restrained occupant of moderate- to high-speed motor vehicle accident.
 - C. Fall of an adult from a height greater than 10 feet
 - D. Compartmental intrusion (30 cm) into the patient's seating space
10. Routine hyperventilation of patients with brain injury should be avoided because it:
 - A. Causes cerebral vasodilatation
 - B. Increases the Intracranial pressure
 - C. Causes cerebral ischemia
 - D. Causes increase in cerebral perfusion pressure
11. The most appropriate immobilization device that takes pressure off specific areas and prevent decubitus is:
 - A. Backboard
 - B. Scoop stretcher
 - C. Back Raft
 - D. Spine board
12. The primary risks associated with oral and dental injuries are:
 - A. Airway compromise from oropharyngeal bleeding
 - B. Ingestion of displaced dental appliance
 - C. Swallowing of avulsed or fractured teeth
 - D. Sepsis of gingiva
13. If the patient had a penetrating injury to the neck, which type of dressing would be applied?
 - A. Bulky dressing, lightly bandaged in place
 - B. Bulky dressing, tightly bandaged in place
 - C. Occlusive dressing, sealed on all sides
 - D. Occlusive dressing, sealed on three sides
14. Zone I anterior neck injuries involve the structures:
 - A. Below the mandible
 - B. Between the clavicle and cricothyroid cartilage
 - C. Between cricoid cartilage and angle of the mandible
 - D. Between angle of the mandible and base of the skull

15. The single most important sign in assessing severity of brain injury in prehospital setting is:
- A. Level of consciousness
 - B. Blood pressure
 - C. Oxygen saturation levels
 - D. Blood glucose level
16. "Blown" pupils are later signs of:
- A. Fracture base of skull
 - B. Increased ICP
 - C. Pressure on optic nerve
 - D. Orbital fracture
17. Spinal injury patients in neurogenic shock present with:
- A. Hypotension and tachycardia
 - B. Hypotension and bradycardia
 - C. Hypercapnia and bradycardia
 - D. Hypercarbia and tachycardia
18. While assessing pupillary reaction in eye injuries, consensual response to light refers to:
- A. Dilatation of both pupils
 - B. Dilatation of the opposite pupil
 - C. Constriction of both pupils
 - D. Constriction of the opposite pupil
19. How do you identify cerebrospinal fluid leakage in skull fracture?
- A. Culture and Sensitivity
 - B. 'Halo' test
 - C. Checking gravity
 - D. Colour
20. A patient who is unconscious has a Glasgow Coma Score of:
- A. 15
 - B. 10
 - C. 13
 - D. 7

SECTION B: SHORT ANSWER QUESTIONS (SAQs): 20 Marks

(Answer all the questions)

1. Outline the four (4) types of skull fractures that can occur in head injury **(8 marks)**
2. Differentiate between traumatic spinal cord injuries and non- traumatic spinal cord injuries giving examples. **(10 marks)**
3. Explain the three types of Le Fort fractures. **(6 marks)**

4. State eight (8) signs and symptoms of increased Intracranial Pressure **(8 Marks)**
5. Outline the specific prehospital management of penetrating trauma to the eyes **(8 marks)**

SECTION C: LONG ESSAY QUESTIONS (LEQS): 40 Marks

(Answer all the questions)

1. You are dispatched to respond to a 45-year-old male who slid from a cliff and sustained a deep cut on the occipital region while on a rock-climbing expedition in the slopes of Mt. Kenya. On arrival you notice the patient is semiconscious, lying prostrate in a pool of blood. Describe your response to this call till patient handover for definitive care **(20 marks)**
2. You and crew are covering a marathon sports event on the countryside far off from any health facility. A speeding motorbike hits a runner on the roadside, the patient is thrown up and lands awkwardly on the back injuring his spine. He is apparently in neurogenic shock as you approach. Describe your assessment and your prehospital interventions. **(20 marks).**

END

