



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

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

THIRD YEAR, FIRST TRIMESTER EXAMINATIONS

FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: BSP 312

COURSE TITLE: NEUROLOGY AND NEUROSURGERY I

DATE: FRIDAY 8TH DECEMBER 2023-----

TIME: 8:00AM TO 10:00AM

INSTRUCTIONS TO CANDIDATES

Answer all Questions

Sec A: Multiple Choice Questions (MCQ) 20 Marks

Sec B: Short Answer Questions (SAQ) (40 marks)

Sec C : Long Answer Questions (LAQ) (40 marks)

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over.



SECTION A: MULTIPLE CHOICE QUESTIONS**(20 marks)**

- 1) A 22 year old female, 10 days post partum. History of headache and seizure, right hemiplegia, confusion. Best test for diagnosis
 - A. CT with contrast brain
 - B. MR venography brain
 - C. Blood film
 - D. MRI brain
 - E. EEG
- 2) What is the most common cause of a bilateral lower motor neurone CN VII palsy?
 - A. Sarcoid
 - B. HIV neuropathy
 - C. Herpes zoster
 - D. Acute inflammatory demyelinating neuropathy
 - E. Brainstem CVA
- 3) The sensation of itching involves all of the following EXCEPT:
 - A. C fibres
 - B. Naked nerve endings
 - C. Histamine
 - D. Pacinian corpuscles
- 4) Normal CSF pressure is:
 - A. 20-120mm Hg
 - B. 100-250mm Hg
 - C. 180-260mm Hg
 - D. 70-180mm Hg
- 5) The distance by which two touch stimuli must be separated to be perceived as two separate stimuli is greatest on:
 - A. The lips
 - B. The palm of the hand
 - C. The back of scapula
 - D. The dorsum of the hand
- 6) Thalamus is the sensory relay station for all of the following sensations except:
 - A. Pain
 - B. Fine touch
 - C. Taste
 - D. Olfaction
- 7) The ipsilateral defects due to total paralysis of oculomotor nerve include all of the following except one. Which is the exception?
 - A. Ptosis
 - B. Dilation of pupil
 - C. Loss of accommodation reflex
 - D. Lateral rectus palsy
- 8) Features of Horner's syndrome include all of the following except one. Which the exception?
 - A. Enophthalmos
 - B. Ptosis and Miosis
 - C. Exophthalmos
 - D. Impaired sweating
- 9) The decerebrate rigidity is characterised by all of the following EXCEPT
 - A. Rigidity occurs in all muscles of the body
 - B. There is increased 'g' motor neuron discharge
 - C. Increased excitability of the motor neuron pool
 - D. Removal of cerebellum reduces the rigidity
- 10) Which of the following is known as Bells phenomena?

- A. Loss of wrinkling of forehead
 - B. Loss of involuntary blinking
 - C. On attempting closure of eyes. Eyeball turns upwards and outwards
 - D. On showing the teeth, the lips do not separate on affected side
- 11) Which is the most common cause of seizure in a 60 year old patient?
- A. Trauma
 - B. Tumor
 - C. Hysteria
 - D. CVA
- 12) All of the following physical signs except one may indicate antiepileptic medication toxicity. Which is the exception?
- A. Ataxia
 - B. Lethargy
 - C. Aphasia
 - D. Dysmetria on heel-shin testing
- 13) Features of myoclonic epilepsy include all of the following except one. Which is the exception?
- A. Myoclonus
 - B. Generalised tonic-clonic seizures
 - C. Automatism
 - D. Absence seizures
- 14) A 25 year old man had severe headache followed by unconsciousness. CSF examination revealed RBCs. Most likely diagnosis is
- A. Subdural hematoma
 - B. Embolism
 - C. Tumour
 - D. Ruptured aneurysm
- 15) A severe head injury is classified as a GCS of:
- A. GCS 11-15
 - B. GCS 3-8
 - C. GCS 8-13
 - D. GCS 6-13
- 16) Which of the following CVA has the highest mortality?
- A. Hemorrhagic stroke
 - B. Embolic stroke
 - C. Thrombotic stroke
 - D. Equal in all of the above
- 17) Which of the following would be an appropriate treatment in the community for a carer to give a child having a prolonged seizure?
- A. IV lorazepam
 - B. Buccal midazolam
 - C. Rectal diazepam
 - D. Phenytoin
- 18) What is the most common cause of intracerebral hemorrhage in adults?
- A. Hypertension
 - B. Ruptured berry aneurysm
 - C. AV malformation
 - D. Trauma
- 19) _____ is used to identify what level the patient is cognitively through the process with a TBI
- A. Rancho Los Amigos
 - B. Allen Cognitive Level
 - C. Blooms Taxonomy Cognitive Level
 - D. ASIA

- 20) Epidural hematoma is commonly caused by injury to which vessels
- Vertebral artery
 - Middle meningeal artery
 - Middle cerebral artery
 - Dural venous sinuses

SECTION B: SHORT ANSWER QUESTIONS

(40 MARKS)

- Draw and label the circle of Willis
- Label the following structures of the lumbar Xray below
- Outline the spinal motorways tracts and their function
- Outline the ocular muscles with their respective innervation
- Appraise different types of nystagmus and their clinical significance
- During therapy what clinical indicators would be associated with a person who has diminished perception after TBI
- Identify triggers associated with seizures in epileptic patients
- Outline how you would assess the first 5 cranial nerves

SECTION C: LONG ANSWER QUESTIONS (40 marks)

- Mr. Njoroge has been transferred to the neurological ward after a CVA yesterday, from the high dependency unit. The MRI shows a lesion affecting the PCA
 - What are the signs and symptoms associated with this particular lesion
 - If you postulate that Mr. Njoroge will have a normal recovery from this etiology. Adapt your management with reference to the stages of recovery for a CVA
- Master Hassan is a 9 year old who is a known epileptic, devise an rehabilitation program for him supporting the reason for your interventions