



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 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: WEDNESDAY 20TH April 2022

TIME: 8:00-11:00 AM

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: 3 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)

- Which of the following is a non-adapting receptor?
 - Hair end organ
 - Chemoreceptor
 - Pacinian corpuscle
 - Nociceptors
- You assess a patient with increased ICP exhibiting signs of decerebrate posturing. Which of these posturing was present?
 - Abnormal flexion of the upper extremities and extension of the lower extremities
 - Rigid extension and pronation of the arms and legs
 - Rigid pronation of all extremities
 - Flaccid paralysis of all extremities
- Which of the following characteristics of an axon is most dependent on its diameter?
 - The magnitude of its resting potential
 - The duration of its refractory period
 - The conduction velocity of its action potential
 - The activity of its sodium-potassium pump
- You are positioning a patient with increased intracranial pressure. Which of the following positions would you avoid?
 - Head midline
 - Head turned to the side
 - Neck in a neutral position
 - Head of the bed elevated 30 -- 45 degrees
- After a fall from a height a patient is brought unconscious, and his pupils are nonreactive. Which intervention would be contraindicated for this patient?
 - Give him a barbiturate
 - Place him on a mechanical ventilation
 - Perform a lumbar puncture
 - Elevate the head of his bed
- Lesions within the basal ganglia produce all of the following signs EXCEPT
 - Hypotonia
 - Tremor
 - Hemiballismus
 - Hypokinesia
- Which of the following assessments data indicate nuchal rigidity?
 - Positive Kernig's sign
 - Negative Brudzinski's sign
 - Positive Homans sign
 - Negative Kernig's sign
- Triad of cerebellar lesion is:
 - Intention tremor, Nystagmus, Hypertonia
 - Intention tremor, Nystagmus, Hypotonia
 - Tremor at rest, Mask like face, Rigidity
 - Mask like face, Tremors, Rigidity
- A patient has clear fluid leaking from the nose following a basilar skull fracture. You assess that this is cerebrospinal fluid if the fluid:
 - Is clear and tests negative for glucose
 - Is grossly bloody in appearance and has a pH of 6
 - Clumps together on the dressing and has a pH of 7
 - Separates into concentric rings and tests positive for glucose
- The fovea of the eye

- A. Has the lowest light threshold
 - B. Is the region of highest visual acuity
 - C. Contains only rods
 - D. Contains only red and green cones
11. You have a client with Bell's palsy in preserving muscle tone and preventing further denervation. you instruct them with which other instructions?
- A. Wrinkle the forehead, whistle
 - B. Massage the face with gentle upward strokes
 - C. Perform facial exercises
 - D. Exposure to cold and drafts
12. Babinski's sign is seen in
- A. Parkinsonism
 - B. Upper motor neuron lesion
 - C. Cerebellar lesion
 - D. Lower motor neuron lesion
13. A patient has impairment of cranial nerve II. Which precautions should be taken by the medical team?
- A. Speak loudly to the patient
 - B. Test the temperature of the shower water
 - C. Check the temperature of the food in the plate
 - D. Provide a clear path for ambulation without obstacles
14. When you take a history of a patient with retinal detachment, you expect the patient to complain of:
- A. Light flashes and floaters in front of the eye
 - B. A recent driving accident while changing lanes
 - C. Headaches, nausea, and redness of the eyes
 - D. Frequent episodes of double vision
15. You perform a mental status examination on a patient diagnosed with a subdural hematoma. The test assesses which of the following?
- A. Intellectual function
 - B. Cerebellar function
 - C. Cerebral function
 - D. Sensory function
16. While cooking your patient couldn't feel the temperature of the oven which lobe is affected?
- A. Frontal
 - B. Occipital
 - C. Parietal
 - D. Temporal
17. Which of the following signs and symptoms of increased ICP after head injury trauma would appear first?
- A. Restlessness and confusion
 - B. Bradycardia
 - C. Large amounts of dilute urine
 - D. Widened pulse pressure
18. A client is admitted for investigation due to balance and coordination problems, including Meniere disease. You are assessing this patient you should except to note:
- A. Vertigo, pain and hearing impairment
 - B. Vertigo, tinnitus and hearing loss
 - C. Vertigo, vomiting and nystagmus
 - D. Vertigo, blurred vision and fever
19. A patient is having a lumbar puncture performed. The doctor should place the patient in which position?
- A. Side lying with a pillow under the hip
 - B. Prone with a pillow under the abdomen

- C. Prone in slight Trendelenburg position
 - D. Side-lying with legs pulled up and head bent down onto the chest
20. A male client with a spinal injury is prone to experience autonomic dysreflexia. The medical team would avoid which of the following measures to minimize the risk of recurrence?
- A. A strict adherence to a bowel retraining program
 - B. Keeping the linen wrinkle-free under the client
 - C. Preventing unnecessary pressure on the lower limbs
 - D. Limiting bladder catheterization to once every 12 hours

SECTION B: SHORT ANSWER QUESTIONS

(40 Marks)

1. Outline the evidence-based pharmacological management of pain used today
2. Describe the various tests and tools you can utilize to assess the balance
3. What are the surgical procedures available to address trigeminal neuralgia?
4. Explain the different bed transfer techniques to a chair you know
5. Discuss the different types of ataxias
6. When we talk about fluent aphasia what do we mean and differentiate the types
7. Describe the causes of increased intracranial pressure
8. Outline the various types of generalized seizures

SECTION C: LONG ANSWER QUESTIONS

(40 Marks)

- 1) Describe the formation of the circle of Willis and associate differentiate the various stroke syndromes
- 2) Write down the assessment and rehabilitation of a paraplegic aged 25 years old who is in a rehabilitation center