



(University of Choice)

**MASINDEMULIROUNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2020/2021 ACADEMIC YEAR**

**THIRD YEAR,  
FOR THE DEGREE  
OF**

**BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
SPECIAL/SUPPLEMENTARY EXAMINATIONS**

**COURSE CODE: BSP 325**

**COURSE TITLE: NEUROLOGY AND NEUROSURGERY II**

**DATE: MONDAY 23/08/2021      TIME: 8:00AM – 11:00 AM**

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**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)**

- 1) The following statements about the cerebrospinal fluid a healthy person is INCORRECT:
  - a) Opening pressure is 50-180 mm/H2O.
  - b) Glucose is usually <25% of blood level.
  - c) Protein content is usually <0.5 g/L.
  - d) White cell count is usually <4 mm<sup>3</sup>.
- 2) Pyramidal lesions may be associated with the following signs EXCEPT
  - a) Ankle clonus
  - b) Babinski sign
  - c) Exaggerated abdominal reflex.
  - d) Clasp Knife spasticity
- 3) Upper motor neuron involvement is characterized by.
  - a) Extensor plantar responses
  - b) Present abdominal reflexes
  - c) Decreased muscle tone and tendon reflexes.
  - d) Dorsiflexion flexion of the great toe in response to rapid dorsiflexion of the toes
- 4) Lower motor neuron involvement is characterized by.
  - a) Spastic muscle tone
  - b) The slow onset of muscle wasting
  - c) Absent or decreased tendon reflexes
  - d) Clonus
- 5) Recognized features of extrapyramidal tract disease include which signs and symptoms?
  - a) Intention tremor
  - b) 'Clasp-knife' rigidity
  - c) Delayed relaxation of the tendon reflexes
  - d) Delayed initiation of movements
- 6) Loss of tendon reflexes is NOT characteristic of which disorder?
  - a) Proximal myopathy
  - b) Peripheral neuropathy
  - c) Syringomyelia
  - d) Tabes dorsalis
- 7) The segmental innervation of the following tendon reflexes is NOT true.
  - a) Biceps jerk-C5-C6
  - b) Supinator jerk-C4-C5
  - c) Knee jerk-L3-L4
  - d) Ankle jerk--L5-S1
- 8) Typical findings in cerebellar disease will NOT include which clinical feature?
  - a) Dysmetria
  - b) Dysarthria
  - c) Intention tremor
  - d) Increased muscle tone
- 9) Features suggesting a third cranial nerve palsy will NOT include which clinical feature?
  - a) Absence of facial sweating
  - b) Complete ptosis

- c) Pupillary dilatation
  - d) Absence of the accommodation reflex
- 10) Characteristic features of pseudobulbar palsy will NOT include
- a) Dysarthria
  - b) Dysphagia
  - c) Emotional lability
  - d) Wasting and fasciculation of the tongue
- 11) A brisk knee jerk may be encountered in the following condition:
- a) Brain tumor
  - b) Brown Sequard syndrome
  - c) Leprotic motor polyneuropathy
  - d) Duchenne myopathy
- 12) Which of the following motor abnormalities does NOT indicate extrapyramidal disease?
- a) Cog wheel rigidity
  - b) Flaccidity
  - c) Lead pipe rigidity
  - d) Static tremors
- 13) The following oral sign (s) may be manifestations of vitamin deficiency:
- a) Angular stomatitis
  - b) Halitosis
  - c) Glazed tongue
  - d) Peg-like teeth
- 14) All the following statements are true about the Trigeminal nerve EXCEPT:
- a) Conveys general sensation from the anterior two thirds of the tongue.
  - b) Conveys general sensation from the anterior two thirds of the scalp.
  - c) Provides motor supply to the Buccinator
  - d) Provides motor supply to the tensor tympani
- 15) Migraine headache is often characterized by the following EXCEPT:
- a) Being throbbing
  - b) Being unilateral
  - c) Associated with nervous tension.
  - d) May be associated with visual disturbances.
- 16) All of the following can occur with motor neuron disease EXCEPT.
- a) Lateral sclerosis.
  - b) Pseudobulbar palsy.
  - c) Progressive muscular atrophy.
  - d) Peripheral neuropathy.
- 17) The most common cause of meningitis is:
- a) Viral
  - b) T. B
  - c) Bacterial
  - d) Malignancy
- 18) CSF protein level is normal in the following type of meningitis:
- a) Viral
  - b) T.B
  - c) Bacterial
  - d) Malignant
- 19) In T.B meningitis.
- a) CSF Glucose level is normal.
  - b) It is more frequent in AIDS patients.
  - c) 3 months antituberculosis drug regimen is the best treatment.

- d) Steroids has no therapeutic role.
- 20) Viral encephalitis is most commonly due to:
- a) HIV
  - b) Poliomyelitis
  - c) Herpes simplex
  - d) Herpes zoster

### **SECTION B: SHORT ANSWER QUESTIONS**

**(40 MARKS)**

1. Explain the tests that focus on testing balance. (8 marks)
2. Regarding injury to the common peroneal nerve
  - a. Deformity ((1 mark)
  - b. Motor deficit to which muscles (4 marks).
  - c. Sensory deficit to which aspects (3 marks)
3. Regarding Duchenne Muscular Dystrophy (DMD)
  - a. What is dystrophy and the cause in DMD (2 marks)
  - b. Investigations for DMD (6 marks)
4. Regrading Poliomyelitis
  - a. Define poliomyelitis (2 mark)
  - b. What CNS structures does it affect? (2 marks)
  - c. What are the causes of bone shortening in polio (3 marks)
5. Regarding sensory examination differentiate how you would examine the large vs the small myelinated sensory fibers. The difference between positive and negative symptoms regarding neuropathy

### **SECTION C: LONG ANSWER QUESTIONS**

**(40 MARKS)**

**Answer any 2 questions:**

1. Beatrice Mutua has been diagnosed with a brachial plexus injury following an RTA. Draw the brachial plexus and write about brachial plexus injury.(20 marks)
2. Kalvin Mambo has been diagnosed with diabetic neuropathy. Discuss the possible types of diabetic neuropathy. (20 marks)
3. Describe the different types of cerebral palsy and highlighting their clinical differences. (20 marks)
4. Regarding brain tumors
  - a. Staging in brain tumours (4 marks)
  - b. Signs and symptoms of brain tumors attributed to the following structures (16 marks)
    - i. Frontal lobe
    - ii. Parietal lobe
    - iii. Occipital lobe
    - iv. Cerebellum