

MASTER OF PHYSIOTHERAPY (MPT)
SEMESTER -IV EXAMINATION, JUNE-2026

(MPT2 402) NEUROLOGICAL DISORDERS- PHYSIOTHERAPEUTIC-II

[Time allotted: Three Hours]

[Max Marks: 100]

Note: Read all the instructions carefully

Answer all questions in serial order. Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All)

(10 x 02 = 20)

(Very short/ short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

- a. Parkinson disease is marked by a lack of which chemical in the brain?
 - i. Serotonin
 - ii. GABA
 - iii. Dopamine
 - iv. Norepinephrine
- b. PPRP Stands for:
 - i. post-polio residual paralysis
 - ii. post-polio syndrome
 - iii. post-paralysis residual polio
 - iv. none of all
- c. A 45-year-old patient presents with symptoms following a cerebral stroke, resulting in right-sided hemiparesis, difficulty with balance, and mild cognitive deficits. The patient reports significant challenges with activities of daily living (ADLs) and exhibits signs of muscle weakness and spasticity on the affected side. Considering the patient's mild cognitive deficits, what is the best approach for structuring physical therapy sessions?
 - i. Ensuring sessions are brief and include clear, step-by-step instructions with frequent breaks
 - ii. Using complex, multi-step exercises to challenge cognitive function
 - iii. Conducting therapy sessions with minimal verbal communication
 - iv. Focusing exclusively on physical tasks without cognitive consideration
- d. A 40-year-old male is admitted to the ICU after being stabbed in the back during a bar fight. Neurological examination reveals loss of all sensation at the T8 level, loss of proprioception and vibration below T8 on one side, and loss of pain and temperature sensation below T8 on the other side. Motor strength is impaired on the same side as loss of proprioception and vibration. Which of the following syndrome best describes the findings on neurological examination in this patient?
 - i. Brown-Sequard syndrome
 - ii. Central cord syndrome
 - iii. Anterior cord syndrome
 - iv. Complete spinal cord injury
- e. Which of the following is first to get affected in leprosy?
 - i. Cold sensation
 - ii. Hot sensation
 - iii. Sweating
 - iv. Fine touch
- f. Diplegic CP is:
 - i. B/L LL than UL
 - ii. B/L ul than LL
 - iii. Unilateral UL& LL
 - iv. None of all
- g. 68-year-old patient with advanced Parkinson's disease is experiencing significant difficulty with gait, including shuffling steps and reduced arm swing. The physical therapist is considering assistive devices to improve mobility and safety. Which assistive device is most likely to help improve gait and reduce fall risk in this patient?
 - i. A single-point cane
 - ii. A walker with wheels
 - iii. A crutch for each arm
 - iv. A wheelchair
- h. Which of the following strategies is important for preventing complications such as deep vein thrombosis (DVT) in a patient recovering from an intracranial abscess?
 - i. Encouraging extended periods of bed rest
 - ii. Performing regular passive range-of-motion (ROM) exercises and early mobilization
 - iii. Limiting fluid intake to reduce the risk of swelling
 - iv. Avoiding any form of physical activity
- i. A 52-year-old patient with a recent diagnosis of Myasthenia Gravis presents with symptoms including muscle weakness, particularly in the facial and proximal limb muscles, difficulty swallowing, and intermittent respiratory difficulties. The patient reports significant fatigue and has a history of fluctuating symptom severity. Given the patient's muscle weakness and significant fatigue, which approach should be prioritized in the physical therapy management plan?
 - i. High-intensity resistance training to rapidly build muscle strength
 - ii. Structuring exercise sessions with a focus on low-intensity, short-duration activities with ample rest breaks
 - iii. Implementing prolonged exercise sessions without rest to improve endurance
 - iv. Focusing exclusively on passive range-of-motion exercises with minimal functional activities.
- j. A 25-year-old patient with transverse myelitis presents with difficulty performing daily activities due to impaired coordination and balance. The physical therapist aims to improve the patient's balance and coordination. Which intervention should be prioritized to address these issues?
 - i. Balance and coordination exercises such as standing on a balance board or performing dynamic weight shifts
 - ii. Strength training of the upper body only
 - iii. Stretching exercises for the upper extremities
 - iv. Utilization of a powered mobility device to reduce the need for balance

- Q. 2. Short notes/ Short answer type questions (Attempt any Five)** **(05 x 04 = 20)**
- a. Explain the protocol of post-operative rehabilitation of L5 discectomy. CO2/PO1
 - b. Write down different recent technique for managing spasticity. CO6/PO3
 - c. Different facilitatory techniques after repairing radial nerve of 21-year-old male for regaining motor function. CO2/PO5
 - d. Pathophysiology of leprosy with its complications CO1/PO1
 - e. Clinical signs of hydrocephalus in adults with its PT management
 - f. Postural control strategies for Parkinson's disease CO3/PO3
 - g. Design a rehabilitation program for a patient with varying levels of motor and sensory deficits due to intramedullary spinal cord compression? CO4/PO4
- Q. 3. Structured questions (Attempt any Three)** **(03 x 10 = 30)**
- a. Clinical feature transvers myelitis. Differential diagnosis of transverse myelitis explains Upper limb training for a patient with quadriparesis following transverse myelitis. CO1/PO6
 - b. What are muscular disorders? Explain various complication of same and strategies to control deformity in muscular dystrophy. CO4/PO4
 - c. What is the etiology of GBS? Clinical diagnostic protocol of GBS and recent PT Management of autonomic dysfunction in Guillain Barre Syndrome. CO2/PO2
 - d. What is CP? Explain various types of CP. Techniques for reduction of spasticity. CO1/PO3
- Q. 4. Long Answer/ Essay type questions (Attempt any Two)** **(02 x 15 = 30)**
- a. Write about various complications of intramedullary tumor and transfer techniques for patient. CO5 /PO2
 - b. Describe in detail about PPRP. Explain the need of recent environment remodeling in PPRP and how can affect recovery process. CO6/ PO5
 - c. What are the deformities of lower limb in poliomyelitis? How you will treat pelvic obligatory and tibial torsion in case of 21 old male. CO4/PO6