



**UNIVERSITI KUALA LUMPUR
ROYAL COLLEGE OF MEDICINE PERAK**

**FINAL EXAMINATION
MARCH 2026 SEMESTER**

COURSE CODE : RFD33102
COURSE NAME : PHYSIOTHERAPY IN NEUROLOGY 2
PROGRAMME NAME : DIPLOMA IN PHYSIOTHERAPY
DATE : 25 JUNE 2026
TIME : 2.30 PM – 4.30PM
DURATION : 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please read CAREFULLY the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of TWO (2) sections; Section A and Section B.
4. Answer ALL questions in Section A and THREE (3) questions in Section B.
5. Please mark/write your answers on the OMR answer script and answer booklet provided.
6. Answer all questions in English language ONLY.

THERE ARE 8 PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

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

INSTRUCTION: Answer ALL questions.

Please use the OMR sheet provided.

1. Identify the etiology of traumatic brain injury (TBI).
 - A. Tumors.
 - B. Falls from height.
 - C. Alcohol intoxication.
 - D. Bacterial meningitis.

2. Which type of TBI occurs when the skull is non-penetrated?
 - A. Blunt TBI.
 - B. Open TBI.
 - C. Closed TBI.
 - D. Diffuse TBI.

3. **"When an object pierces the skull and enters the brain tissue."**
Find the type of TBI.
 - A. Blunt head injury.
 - B. Closed head injury.
 - C. Intracranial head injury.
 - D. Penetrating head injury.

4. Select the clinical features of autonomic dysreflexia in spinal cord injury (SCI).
 - A. Hypertension.
 - B. Cardiac arrest.
 - C. Short of breath.
 - D. Abdominal pain.

5. **"No sensory or motor function in the lowest sacral segments."**
Identify the type of SCI.
 - A. Total paralysis.
 - B. Complete injury.
 - C. Incomplete injury.
 - D. Hemisection injury.

6. Select the syndrome that causes compression of the nerves at the end of spinal cord.
- A. Central cord syndrome.
 - B. Anterior cord syndrome.
 - C. Cauda equina syndrome.
 - D. Brown Sequard syndrome.
7. **"Motor deficits in the upper extremities compared to the lower extremities."**
Identify the cord syndrome.
- A. Central cord syndrome.
 - B. Anterior cord syndrome.
 - C. Posterior cord syndrome.
 - D. Brown-Sequard syndrome.
8. What is the condition that cause inflammation of brain parenchyma?
- A. Hepatitis.
 - B. Meningitis.
 - C. Encephalitis.
 - D. Poliomyelitis.
9. Which condition cause inflammation of cerebrospinal membranes?
- A. Hepatitis.
 - B. Meningitis.
 - C. Encephalitis.
 - D. Poliomyelitis.
10. Select the transmission of poliomyelitis.
- A. Fecal-oral route.
 - B. Contaminated blood.
 - C. Direct sexual contact.
 - D. Vector-borne transmission.
11. Identify the non-infective inflammation in meningitis.
- A. Fungal meningitis.
 - B. Aseptic meningitis.
 - C. Parasitic meningitis.
 - D. Bacterial meningitis.

12. What causes demyelinating disease?
- A. Damage of myelin sheath.
 - B. Degeneration of the axon cylinder.
 - C. Overproduction of myelin by oligodendrocytes.
 - D. Impaired neurotransmitter release at the synapse.
13. Which demyelinating disease affects the peripheral nervous system?
- A. Multiple sclerosis.
 - B. Transverse myelitis.
 - C. Neuromyelitis optica.
 - D. Guillain Barré Syndrome (GBS).
14. Select the causes of slurred speech in GBS.
- A. Bulbar involvement.
 - B. Lumbar involvement.
 - C. Broca's area involvement.
 - D. Autonomic nervous system involvement.
15. Identify the neurological disorder caused by inflammation across spinal cord.
- A. Myasthenia Gravis.
 - B. Transverse myelitis.
 - C. Guillain Barré Syndrome (GBS).
 - D. Anterior spinal artery syndrome.
16. Select the causes of Myasthenia Gravis.
- A. Anterior horn cell degeneration.
 - B. Neuromuscular junction disorder.
 - C. Disruption of the skeletal muscle sarcolemma.
 - D. Demyelination of central nervous system tracts.
17. Identify the clinical features of Myasthenia Gravis.
- A. Numbness.
 - B. Double vision.
 - C. Pain over limbs.
 - D. Resting tremors.

18. **"It helps with guidance of body to develop posture and movement pattern."**
Find the neuro developmental therapy (NDT) principle.
- A. Key points of control.
 - B. Environmental modification.
 - C. Reflex inhibiting posture (RIP).
 - D. Compensatory movement strategy.
19. What is the function of inhibition in Bobath therapy?
- A. It guides to correct movement.
 - B. It replaces the need for practice.
 - C. It prevents neuroplastic changes.
 - D. It decreases abnormal muscle tone.
20. **"Individual may have a general idea of the movement required for a task but might not be sure how to execute that movement."**
Select the stage motor relearning programme (MRP).
- A. Initial stage.
 - B. Cognitive stage.
 - C. Associative stage.
 - D. Autonomous stage.

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SECTION B: MODIFIED ESSAY QUESTIONS (Total: 60 marks)

INSTRUCTION: This section consists of FOUR (4) questions.

Answer THREE (3) questions in the answer booklet provided.

Question 1

- (a) List **SIX (6)** clinical features of traumatic brain injury. (6 marks)
- (b) Explain about concussion. (4 marks)
- (c) List **TWO (2)** types of neuroplasticity. (2 marks)
- (d) State **FOUR (4)** type of task in MRP. (4 marks)
- (e) Describe **FOUR (4)** importance of carer guidance in NDT. (4 marks)

Question 2

- (a) List **SIX (6)** mechanism of SCI.

(6 marks)

- (b) Tabulate the differences between paraplegia and tetraplegia in SCI.

(2 marks)

- (c) "Mr. M is a 28-year-old construction worker who suffered a traumatic SCI in the past three months ago after a fall during working. He has completely lost motor function and sensation from the mid-chest down and uses a manual wheelchair. He has recently been discharged and required physiotherapy session."

With reference to the above case, answer the following question.

- i. Identify **EIGHT (8)** goals of physiotherapy for him.

(8 marks)

- ii. State **FOUR (4)** outcome measure suitable for his condition.

(4 marks)

Question 3

- (a) Discuss **THREE (3)** etiology of meningitis.

(6 marks)

- (b) "Leo is a 5-year-old boy living in a remote rural village with limited access to clean running water and healthcare infrastructure. He had traveled to another rural village recently to visit his uncle. He also never received his childhood routine immunizations and vaccine. He is complaining of severe muscle pain in his legs and could no longer stand or support his own weight."

With reference to the above case, answer the following question.

- i. Identify the condition related to him.

(1 marks)

- ii. Identify **THREE (3)** risk factors related to condition in (i).

(3 marks)

- iii. Explain **FIVE (5)** physiotherapy interventions for condition in (i).

(10 marks)

Question 4

Mrs. A, a 34-year-old teacher, presents severe weaknesses in her arms and legs, along with drooping eyelids that worsen toward the end of the day. She notes that her symptoms peaked last week while she was under intense emotional stress grading final exams and simultaneously fighting off a respiratory infection accompanied by a high fever. She also mentioned had taking a hot bath and feeling overheated. Diagnostic imaging shows that her thymus gland is producing auto-antigens, which have triggered an abnormal autoimmune response.

With reference to the above case, answer the following question.

- (a) Identify the condition of Mrs. A. (1 mark)
- (b) State **FIVE (5)** risk factors related to condition in (a). (5 marks)
- (c) Discuss the pathology of the condition in (a). (4 marks)
- (d) State **TEN (10)** goals of physiotherapy for condition in (a) (10 marks)

END OF EXAMINATION PAPER