9.7 Lesion localisation

Name: _____ Class: _____ Date: _____ **Total: 24 marks**

KEY WORDS Babinski sign

Objective

Localise a fictional case, level by level, with reasons.

1 Key knowledge and worked examples

■ The four signatures

Cortical: higher function + contralateral signs. Brainstem: crossed (ipsilateral cranial nerve, contralateral body). Spinal: sensory level, UMN below, LMN at level. Peripheral: nerve/root territory, LMN, no UMN ✓.

■ Worked example: the climb

Right lower-face weakness (brow spared) + left hemiparesis + aphasia → cortex; UMN VII; above the pyramids → left MCA territory ✓.

2 Practice

2.1 Which level owns crossed findings? [3]

2.2 What single feature does the cord contribute that no other level has? [3]

2.3 A peripheral pattern WITH UMN signs – what does the map say? [3]

3 Exam-style questions

3.1 A fictional case: right facial weakness sparing the brow, left hemiparesis, non-fluent speech.

Climb stepwise: aphasia → cortex; brow-sparing facial weakness → UMN VII above the nucleus; contralateral hemiparesis → corticospinal above the pyramids; conclude LEFT middle cerebral artery territory ✓. Give the reason at each rung. [8]

3.2 A fictional case: burning both feet, absent ankle jerks, normal plantar responses, no trunk level.

Assign the pattern (peripheral, length-dependent polyneuropathy) and justify each sign. Contrast the cord-compression pattern (a trunk sensory level with UMN signs below). State the one finding that would break the peripheral pattern (plantars upgoing – motor neuron disease territory) ✓. [7]