UNIVERSITY MEDICINE • EXERCISE SHEET

# 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]