

## 3.2 Upper limb

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Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Total: 23 marks**

**KEY WORDS** brachial plexus

### Objective

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Trace the brachial plexus and localise nerve lesions from motor signs.

### 1 Key knowledge and worked examples

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#### ■ Five roots, five nerves

C5–T1 → trunks → cords → musculocutaneous (flex), axillary (abduct), radial (extend), median (oppose), ulnar (spread).

#### ■ Worked example: one-line reads

Wrist drop = radial ✓; ape hand = median at the carpal tunnel ✓; claw hand = ulnar at the elbow ✓ – test the movement, name the nerve.

### 2 Practice

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**2.1** Which nerve runs in the groove behind the medial epicondyle? [3]

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**2.2** Which nerve injury spares the shoulder but abolishes elbow extension? [3]

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**2.3** Name the roots of the brachial plexus. [3]

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### 3 Exam-style questions

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**3.1** A patient cannot extend wrist or fingers; shoulder abduction and thumb opposition are intact.

Name the nerve and the likely site (spiral groove). Explain why sensation over the dorsal first web space is affected. Predict the effect on elbow extension and explain why. [7]

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**3.2** A patient has loss of thumb opposition and thenar wasting, with sensation lost over the radial three and a half digits.

Localise the lesion (median, carpal tunnel). Explain why the forearm pronators and flexors are SPARED in this site. State the classic night symptom and its mechanism. [7]

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## Solutions

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### 2.1

- Ulnar nerve.

### 2.2

- Radial nerve (elbow extension = triceps, radial; the site spares the branch pattern).

### 2.3

- C5, C6, C7, C8, T1 ✓.

### 3.1

- Radial nerve in the spiral groove of the humerus.
- Dorsal first web space is radial autonomous territory.
- Elbow extension spared if the triceps branches leave before the groove (typical); involved if injured higher – the level is read from which muscles share the nerve's course.

### 3.2

- Median nerve at the carpal tunnel (thenar branch distal).
- Forearm pronators/flexors are supplied ABOVE the tunnel – the lesion is distal to their branches.
- Night paraesthesia: immobile wrists pool oedema; the classic relief is shaking the hand.