Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

middle of the humerus (spiral groove): **radial**

front of the wrist (carpal tunnel): **median**

behind the inner elbow: **ulnar**

2.2

A: **ulnar**

B: **median**

2.3

(a) the **upper trunk**; **Erb** palsy

(b) the arm hangs by the side, turned inwards, with the elbow straight

2.4

the **axillary** nerve

test shoulder abduction (deltoid) or feel for numb skin over the deltoid

3.1

(a) the **median** nerve in the **carpal tunnel** at the wrist

(b) the skin branch to the palm leaves the median nerve above the wrist, so it passes over the tunnel, not through it

(c) tap over the tunnel and the tingling returns (Tinel test); hold the wrists bent for one minute and the symptoms come (Phalen test)

(d) a wrist splint at night, or surgery to cut the ligament over the tunnel

3.2

(a) the **radial** nerve in the **spiral groove** of the humerus, pressed against the bone

(b) the branches to the triceps leave the radial nerve above the groove, so they are not pressed

(c) the back of the hand between the thumb and index finger

3.3

(a) **C5** and **C6**

(b) the deltoid (axillary nerve) and biceps (musculocutaneous nerve) are supplied by two different nerves; both share roots C5–C6, so the injury is above where the nerves split

(c) the triceps reflex uses C7, which is not injured

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(d) the head is pushed away from the shoulder, stretching the upper roots and upper trunk