Solutions

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

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

2.1

V3: **foramen ovale**

VII and VIII: **internal acoustic meatus**

X: **jugular foramen**

2.2

A: forehead spared, so **stroke** (upper motor neurone)

B: forehead involved, so **Bell palsy** (lower motor neurone)

2.3

the eye looks **down and out**

the upper lid droops (**ptosis**)

the pupil is large and does not constrict

2.4

the **middle meningeal artery**

an **extradural haematoma**

3.1

(a) the lower brachial plexus; the right recurrent laryngeal nerve; the sympathetic chain (Horner syndrome)

(b) the sympathetic nerve that opens the pupil is cut, so the parasympathetic nerve that closes it works unopposed

(c) CT or MRI of the chest and lung apex

(d) **C8–T1**

3.2

(a) **extradural haematoma** from the **middle meningeal artery**

(b) the brain recovers from the blow at first; arterial blood then slowly strips the dura off the skull and builds up until it presses on the brain

(c) a lens shape (biconvex) that stops at the skull sutures

3.3

(a) a **vestibular schwannoma** (acoustic neuroma); nerves **VII** and **VIII**

(b) it grows from VIII, so hearing goes first; as it enlarges it presses VII in the same hole, so the face weakens later

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(c) V1 carries the feeling and VII the blink; the tumour now presses V1 (the trigeminal nerve)

(d) Weber: the sound is louder in the **right** (good) ear; Rinne: air conduction still better than bone conduction on the left