3.7 Head and neck

Name: _____ Class: _____ Date: _____ **Total: 23 marks**

KEY WORDS cranial nerves

Objective

Pair cranial nerves with foramina and localise lesions from combined signs.

1 Key knowledge and worked examples

■ **Twelve and their holes**

II optic canal; III/IV/VI SOF; V1/V2/V3 fissure/rotundum/ovale; VII+VIII IAM; IX/X jugular; XII hypoglossal ✓.

■ **Worked example: the forehead test**

Forehead SPARED = central; INVOLVED = peripheral VII ✓ – one muscle test splits emergency from benign. VII+VIII share the meatus: deafness precedes facial palsy in a schwannoma ✓.

2 Practice

2.1 Which foramen carries IX and X? [3]

2.2 A patient cannot abduct the eye. Which nerve? [3]

2.3 Which nerve exits the foramen ovale? [3]

3 Exam-style questions

3.1 Sudden left facial weakness; the patient can raise both eyebrows.

Classify the lesion level with reasoning. State the single muscle test used. List three further peripheral-VII features to seek. [7]

3.2 An apical lung mass (fictional smoker): hand wasting, hoarse voice, droopy left pupil.

Name the three structures compressed. Explain why this corner of anatomy yields the triad. State one further sign of the same triad. [7]

Solutions

2.1

- Jugular foramen.

2.2

- Abducens (VI).

2.3

- V3 (mandibular division of trigeminal).

3.1

- Central (upper motor neuron): forehead has bilateral cortical input, so it survives.
- Test: “raise your eyebrows”.
- Peripheral features to seek: incomplete eye closure, taste loss (anterior two-thirds), hyperacusis, reduced lacrimation.

3.2

- Brachial plexus (C8–T1), left recurrent laryngeal, cervical sympathetic chain.
- The apex crowns the cupola where all three pass within millimetres – one corner, three systems.
- Further: enophthalmos and anhidrosis (Horner’s set).