

# NEET MDS Oral and Maxillofacial Surgery Sample Paper – 5

Duration: 90 Minutes

Max Marks: 400

- Q1.** During removal of a mandibular third molar, the most commonly damaged adjacent tooth is the:
- (A) Second premolar
  - (B) First molar
  - (C) First premolar
  - (D) Central incisor
- Q2.** Mesioangular class II impaction of the mandibular third molar is the most common risk factor for damage to the second molar during extraction because:
- (A) The roots of the third molar are fused
  - (B) The third molar is entirely below the alveolar crest
  - (C) The angulation directs force away from the second molar
  - (D) The crown of the third molar is wedged beneath the contact point of the second molar
- Q3.** Classification of impaction disturbance based on the direction of the long axis of the impacted tooth relative to the adjacent tooth is termed:
- (A) Positional classification (Pell and Gregory)
  - (B) Angulation classification (Winter's classification)
  - (C) Depth classification
  - (D) Bone contact classification
- Q4.** Which genetic condition is most strongly associated with multiple impacted teeth in all four quadrants?
- (A) Cleidocranial dysplasia
  - (B) Down syndrome



- (C) Treacher Collins syndrome
- (D) Apert syndrome

**Q5.** Gardner syndrome is associated with multiple impacted teeth along with:

- (A) Absent clavicles and open fontanelles
- (B) Colonic polyposis, osteomas, and epidermoid cysts
- (C) Basal cell naevi and bifid ribs
- (D) Cardiac defects and hearing loss

**Q6.** A palatally impacted maxillary canine is best managed by:

- (A) Extraction of the impacted canine and space closure
- (B) Observation until spontaneous eruption occurs
- (C) Surgical exposure combined with orthodontic traction
- (D) Autotransplantation to the correct position

**Q7.** The closed eruption technique for surgical exposure of an impacted tooth involves:

- (A) Removing bone and leaving the crown exposed to the oral environment
- (B) Creating a window in the mucosa and packing with surgical dressing
- (C) Apically repositioning the flap to keep the tooth visible
- (D) Bonding a bracket to the tooth after bone removal, then closing the flap over it

**Q8.** For a labially impacted maxillary canine, the preferred surgical approach is:

- (A) Palatal approach with open window
- (B) Extraction and prosthetic replacement
- (C) Labial open surgical exposure with or without orthodontic traction
- (D) Closed eruption technique via the palate



- Q9.** Conservative management of an impacted mandibular second premolar in a 10-year-old child primarily involves:
- (A) Immediate surgical exposure and bonding
  - (B) Extraction of the premolar
  - (C) Observation and allowing spontaneous eruption after removal of the overlying primary molar
  - (D) Autotransplantation
- Q10.** The buccal fat pad (Bichat's fat pad) lies in close proximity to the:
- (A) Lower third molar socket buccally
  - (B) Upper third molar region buccally
  - (C) Lingual aspect of the lower third molar
  - (D) Mental foramen region
- Q11.** Which of the following is a recognised long-term risk of leaving an asymptomatic impacted mandibular third molar in situ in a young adult?
- (A) Aneurysmal bone cyst
  - (B) Osteosarcoma
  - (C) Dentigerous cyst formation and possible ameloblastoma
  - (D) Hypercementosis of adjacent teeth
- Q12.** For surgery of an upper third molar, the most appropriate local anaesthetic technique is:
- (A) Inferior alveolar nerve block
  - (B) Posterior superior alveolar nerve block with palatal infiltration
  - (C) Mental nerve block
  - (D) Lingual nerve block
- Q13.** An oroantral communication (OAC) differs from an oroantral fistula (OAF) in that:
- (A) OAC has an epithelial lining whereas OAF does not



- (B) OAC involves the nasal cavity whereas OAF involves the maxillary sinus
- (C) OAF is acute and OAC is chronic
- (D) OAC is an acute perforation without epithelial lining; OAF is a chronic tract lined by epithelium

**Q14.** The preferred surgical technique for closure of a small oroantral fistula (OAF) is:

- (A) Palatal rotation flap
- (B) Tongue flap
- (C) Buccal advancement flap (buccal fat pad flap or mucoperiosteal advancement)
- (D) Primary closure without flap

**Q15.** A sinus lift (maxillary sinus floor elevation) procedure is performed to:

- (A) Increase the height of alveolar bone in the posterior maxilla for implant placement
- (B) Drain a maxillary sinusitis
- (C) Remove a root displaced into the maxillary sinus
- (D) Repair an oroantral fistula

**Q16.** The principle of controlled force in exodontia refers to:

- (A) Applying maximum force rapidly to fracture alveolar bone
- (B) Using only rotational movements for all teeth
- (C) Applying steady, firm, controlled apical and expansive forces to avoid root fracture and bone damage
- (D) Removing the tooth with minimal instrument contact

**Q17.** The primary movement used during extraction of the mandibular canine is:

- (A) Figure-of-eight movement



- (B) Purely buccal force
- (C) Purely lingual force
- (D) Rotational movement combined with buccal and lingual expansion

**Q18.** The recommended antibiotic prophylaxis for prevention of infective endocarditis in a patient with a prosthetic heart valve undergoing tooth extraction is:

- (A) Metronidazole 400 mg orally 1 hour before
- (B) Amoxicillin 2 g orally 1 hour before the procedure
- (C) Amoxicillin 500 mg three times daily for 5 days
- (D) No antibiotic is required

**Q19.** In an immunosuppressed patient with absolute neutrophil count below 500 cells/mm<sup>3</sup> requiring tooth extraction, the recommended approach is:

- (A) Prophylactic antibiotics and haematological consultation before extraction
- (B) Extraction without antibiotics
- (C) Delay extraction indefinitely
- (D) Perform extraction under general anaesthesia only

**Q20.** In a patient who has received radiotherapy to the head and neck region, extraction of teeth in the irradiated field carries the significant risk of:

- (A) Nerve damage
- (B) Excessive haemorrhage
- (C) Rapid socket infection
- (D) Medication-related osteonecrosis of the jaw (MRONJ)/osteoradionecrosis

**Q21.** Adrenaline-soaked gauze placed in the extraction socket is primarily used to:

- (A) Promote bone formation



- (B) Achieve local haemostasis through vasoconstriction
- (C) Prevent dry socket
- (D) Reduce post-operative pain

**Q22.** When a root tip of an upper molar is displaced close to the floor of the maxillary sinus and is less than 5 mm in size and asymptomatic, the recommended management is:

- (A) Immediate Caldwell-Luc operation
- (B) Immediate endoscopic retrieval
- (C) Extraction via a sinus window approach
- (D) Leave in situ, inform the patient, and follow up radiographically

**Q23.** Serial extraction in orthodontics involves:

- (A) Sequential timed extraction of deciduous and permanent teeth to guide eruption and reduce crowding
- (B) Immediate extraction of all crowded teeth at one visit
- (C) Extraction of only the first premolars in all quadrants simultaneously
- (D) Extraction of teeth after full orthodontic alignment

**Q24.** Avulsion (complete exarticulation) of a permanent tooth is best managed by:

- (A) Discarding the tooth and placing an immediate denture
- (B) Cleaning the tooth with antiseptic and reimplanting after 2 hours
- (C) Storing in tap water and reimplanting within 24 hours
- (D) Storing in milk or saline, and reimplanting as soon as possible (ideally within 30–60 minutes)

**Q25.** Subluxation of a tooth differs from luxation in that:

- (A) Subluxation involves complete displacement from the socket
- (B) Subluxation involves injury to the periodontal ligament with abnormal mobility but no displacement from the socket



- (C) Subluxation is more severe than luxation
- (D) Subluxation requires immediate extraction

**Q26.** The three divisions of the trigeminal nerve are:

- (A) Ophthalmic, mandibular, and facial
- (B) Maxillary, mandibular, and glossopharyngeal
- (C) Ophthalmic, maxillary, and hypoglossal
- (D) Ophthalmic, maxillary, and mandibular

**Q27.** The maxillary nerve block through the pterygopalatine fossa (second division block) is indicated when:

- (A) Routine infiltration anaesthesia is adequate
- (B) Only soft tissue anaesthesia is required
- (C) Painful procedures fail with routine infiltration, or when wide-field anaesthesia of the maxilla is required
- (D) The patient has needle phobia

**Q28.** The auriculotemporal nerve is clinically significant in TMJ pain because:

- (A) It carries sensory fibres from the TMJ and can refer pain to the temporal and auricular region
- (B) It provides motor innervation to the masseter
- (C) It is the branch anaesthetised in inferior alveolar nerve block
- (D) It carries taste fibres from the anterior tongue

**Q29.** The chorda tympani nerve, a branch of the facial nerve, joins the lingual nerve and carries:

- (A) General sensation from the anterior two-thirds of the tongue
- (B) Motor fibres to the mylohyoid
- (C) Postganglionic parasympathetic fibres to the parotid gland
- (D) Taste from the anterior two-thirds of the tongue and preganglionic parasympathetic fibres to the submandibular and sublingual glands



- Q30.** The Wand/STA (Single Tooth Anaesthesia) computer-controlled delivery system provides anaesthesia by:
- (A) Delivering anaesthetic at high speed to overcome resistance
  - (B) Delivering anaesthetic at a slow, controlled, constant rate to minimise pain on injection
  - (C) Using a needleless jet injection technique
  - (D) Administering intraosseous anaesthesia only
- Q31.** Vibration anaesthesia devices such as DentalVibe work on the principle of:
- (A) Chemical desensitisation of the mucosa
  - (B) Cooling the tissue to cause numbness
  - (C) Distraction of the patient's attention
  - (D) Gate control theory – vibration signals inhibit pain transmission at the spinal cord/brainstem level
- Q32.** Nitrous oxide inhalation sedation in dentistry provides:
- (A) Anxiolysis, mild analgesia, and cooperation without loss of consciousness
  - (B) Deep sedation equivalent to general anaesthesia
  - (C) Complete pain control without local anaesthesia
  - (D) Muscle relaxation adequate for jaw surgery
- Q33.** When performing intravenous sedation with midazolam, the minimum monitoring requirement includes:
- (A) Only verbal contact with the patient
  - (B) Blood pressure measurement only
  - (C) Pulse oximetry, blood pressure, ECG, and continuous clinical observation
  - (D) Capnography alone



- Q34.** Bispectral Index (BIS) monitoring is used to assess:
- (A) Depth of anaesthesia/sedation using processed EEG
  - (B) Oxygen saturation during sedation
  - (C) Blood pressure variability
  - (D) Neuromuscular blockade
- Q35.** General anaesthesia for dental surgery is indicated in all of the following EXCEPT:
- (A) Severely anxious uncooperative patient
  - (B) Routine single extraction in a healthy cooperative adult
  - (C) Patients with severe learning disabilities
  - (D) Extensive oral surgery requiring multiple extractions
- Q36.** Moffatt's solution used for nasal anaesthesia contains:
- (A) Lignocaine and adrenaline
  - (B) Bupivacaine and hyaluronidase
  - (C) Cocaine, sodium bicarbonate, and adrenaline
  - (D) Prilocaine and felypressin
- Q37.** EMLA cream (eutectic mixture of local anaesthetics) is used for:
- (A) Inferior alveolar nerve block in adults
  - (B) Topical anaesthesia of mucosa or skin, particularly in paediatric patients prior to injection
  - (C) Treatment of post-herpetic neuralgia
  - (D) Intraligamentary injections
- Q38.** Phentolamine mesylate (OraVerse) is used in dentistry to:
- (A) Reverse soft tissue numbness after dental local anaesthesia by blocking alpha-adrenergic receptors
  - (B) Enhance the depth of local anaesthesia



- (C) Prevent haematoma formation
- (D) Reduce post-operative swelling

**Q39.** The nasociliary nerve and its branch the infratrochlear nerve are relevant to anaesthesia of the:

- (A) Lower lip and chin
- (B) Anterior hard palate
- (C) Medial canthus of the eye, skin of the nose, and anterior nasal septum
- (D) Buccal mucosa of the upper premolar region

**Q40.** Laser-assisted local anaesthesia (photobiomodulation prior to injection) reduces injection pain by:

- (A) Destroying nerve fibres permanently
- (B) Modulating nociceptor activity and reducing membrane excitability in the target tissue
- (C) Causing topical vasoconstriction
- (D) Heating the tissue to block conduction

**Q41.** The submandibular space infection most commonly arises from:

- (A) Upper anterior teeth
- (B) Lower anterior teeth
- (C) Upper molars
- (D) Lower molars, particularly the lower second and third molars

**Q42.** Submental space infection typically originates from:

- (A) Mandibular anterior teeth
- (B) Maxillary anterior teeth
- (C) Lower molars
- (D) Upper premolars



- Q43.** Ludwig's angina characteristically involves bilateral involvement of the:
- (A) Masticator spaces
  - (B) Parapharyngeal spaces
  - (C) Buccal spaces
  - (D) Submandibular, sublingual, and submental spaces
- Q44.** Descending necrotizing mediastinitis (DNM) is a serious complication of deep neck space infection with a reported mortality rate of approximately:
- (A) Less than 5%
  - (B) 10–15%
  - (C) 20–40%
  - (D) Over 70%
- Q45.** Necrotizing fasciitis of the head and neck is characterised by:
- (A) Slow indolent course with minimal systemic effects
  - (B) Rapid spread along fascial planes with skin necrosis, crepitus, systemic sepsis, and high mortality
  - (C) Primarily affecting the parotid gland
  - (D) Occurring only in immunocompetent patients
- Q46.** Crepitus on palpation of a fascial space infection suggests the presence of:
- (A) Emphysema from a perforated air-containing viscus
  - (B) Gas-forming organisms such as Clostridium species or certain anaerobes
  - (C) Bony crepitus from a fracture
  - (D) Pus under tension
- Q47.** Brodie abscess represents:
- (A) Acute suppurative osteomyelitis with cortical perforation



- (B) Diffuse sclerosing osteomyelitis
- (C) Chronic localised osteomyelitis presenting as a walled-off cavity filled with granulation tissue in the medullary bone
- (D) Osteomyelitis secondary to radiation

**Q48.** The Zurich classification of osteomyelitis of the jaw divides the condition into all of the following categories EXCEPT:

- (A) Acute osteomyelitis
- (B) Secondary chronic osteomyelitis
- (C) Pharmacological osteomyelitis
- (D) Primary chronic osteomyelitis

**Q49.** Oral hairy leukoplakia, seen in HIV-positive patients, is caused by:

- (A) Epstein-Barr virus (EBV)
- (B) Candida albicans
- (C) Human papillomavirus (HPV)
- (D) Herpes simplex virus (HSV)

**Q50.** Kaposi sarcoma in HIV-positive patients most commonly affects which oral site?

- (A) Buccal mucosa
- (B) Floor of mouth
- (C) Lateral border of tongue
- (D) Hard palate and gingiva

**Q51.** The suprahyoid muscles that form the floor of the mouth include all of the following EXCEPT:

- (A) Mylohyoid
- (B) Omohyoid
- (C) Geniohyoid
- (D) Digastric (anterior belly)



- Q52.** In Ludwig's angina, the primary airway concern arises because:
- (A) Bilateral sublingual space swelling pushes the tongue superiorly and posteriorly, threatening the oropharyngeal airway
  - (B) Infection directly involves the larynx
  - (C) Trismus prevents mouth opening for intubation only
  - (D) Infection compresses the carotid artery
- Q53.** Clinical signs of zygomatic complex fracture include all of the following EXCEPT:
- (A) Malar flattening
  - (B) Proptosis of the eyeball
  - (C) Infraorbital anaesthesia
  - (D) Step deformity at the infraorbital rim
- Q54.** The gold-standard imaging modality for complex facial fractures is:
- (A) Plain radiograph (OPG)
  - (B) MRI of the face
  - (C) CT scan with three-dimensional reconstruction
  - (D) Ultrasound of facial soft tissues
- Q55.** In management of a panfacial fracture, the generally accepted treatment sequence is:
- (A) Bottom-up approach: mandible first to re-establish occlusion and facial height, then midface, then upper face
  - (B) Top-down approach: frontal bone first, then midface, then mandible
  - (C) Midface first, then mandible, then upper face
  - (D) Soft tissue closure first, then bony reconstruction
- Q56.** TMJ ankylosis as a delayed complication of condylar fracture is most likely to develop when:



- (A) The fracture is in the subcondylar region and treated by open reduction
- (B) The fracture is bilateral and treated conservatively
- (C) The patient is elderly
- (D) The fracture occurs in a child with associated haemarthrosis and inadequate physiotherapy

**Q57.** In a tripod (trimalar) fracture of the zygoma, fixation at which suture is most important for restoring vertical height and projection?

- (A) Zygomaticomaxillary buttress
- (B) Zygomaticofrontal suture
- (C) Zygomaticotemporal suture
- (D) Infraorbital rim

**Q58.** The initial conservative management period recommended for orbital floor blowout fracture before surgical reconstruction is:

- (A) 48 hours
- (B) 5–7 days
- (C) 10–14 days
- (D) 4–6 weeks

**Q59.** A frontal sinus fracture involving the posterior wall requires cranialization because:

- (A) Posterior wall fractures always involve the orbit
- (B) The anterior wall cannot be plated
- (C) CSF leak is not expected from posterior wall fractures
- (D) Posterior wall involvement risks intracranial complications; cranialization obliterates the sinus to protect the dura

**Q60.** The recommended timing for soft tissue closure in facial trauma is:

- (A) After 48–72 hours to allow swelling to subside



- (B) Early primary closure within 24 hours, as the face has excellent blood supply
- (C) Only after bony fixation is complete, which may be weeks later
- (D) Delayed secondary closure in all cases

**Q61.** Enophthalmos following zygomatic complex fracture results from:

- (A) Increased orbital volume due to displaced orbital walls, causing the globe to sink posteriorly
- (B) Damage to the optic nerve
- (C) Prolapse of orbital fat anteriorly
- (D) Haematoma displacing the globe forward

**Q62.** The standard plain radiograph view that best demonstrates the maxillary sinuses and midface in facial fractures is:

- (A) Lateral skull view
- (B) Submentovertex view
- (C) Towne's view
- (D) Occipitomenal (Water's) view

**Q63.** Trismus following facial trauma most commonly indicates involvement of the:

- (A) Frontal bone
- (B) Zygomatic arch or masticator space
- (C) Nasal bones
- (D) Orbital floor only

**Q64.** A frontal sinus fracture involving the anterior wall only, with no posterior wall involvement and no nasofrontal duct injury, is best managed as:

- (A) Observation only with no surgical intervention
- (B) Cranialization
- (C) Obliteration with fat



(D) Open reduction and internal fixation as a facial bone fracture

**Q65.** The mechanism of cyst expansion in jaw cysts is best explained by:

- (A) Direct bone resorption by the cyst epithelium
- (B) Increased osmotic pressure within the cyst lumen drawing fluid in, combined with prostaglandins and collagenase from the cyst wall
- (C) Rapid epithelial proliferation alone
- (D) Inflammatory oedema only

**Q66.** Satellite (daughter) cysts in the wall of a keratocystic odontogenic tumour (KCOT) contribute to high recurrence rates by:

- (A) Increasing cyst osmotic pressure
- (B) Making radiographic diagnosis difficult
- (C) Remaining in the bone after enucleation of the parent cyst, acting as foci for regrowth
- (D) Causing cortical perforation

**Q67.** Keratocystic odontogenic tumour (KCOT) in Gorlin-Goltz (naevoid basal cell carcinoma) syndrome is associated with a mutation in the:

- (A) TP53 tumour suppressor gene
- (B) RB1 gene
- (C) KRAS proto-oncogene
- (D) PTCH1 (Patched 1) gene

**Q68.** Calcifying odontogenic cyst (Gorlin cyst) is characterised histologically by:

- (A) Ghost cells and calcifications within an ameloblastoma-like epithelial lining
- (B) Parakeratinised stratified squamous epithelium without ghost cells
- (C) Orthokeratinised epithelium with a granular cell layer
- (D) Mucous cells and salivary tissue



- Q69.** Orthokeratinized odontogenic cyst (OOC) differs from KCOT clinically in that:
- (A) OOC has a higher recurrence rate
  - (B) OOC is always associated with an impacted tooth
  - (C) OOC shows PTCH1 mutation
  - (D) OOC has a significantly lower recurrence rate after enucleation compared to KCOT
- Q70.** A solitary bone cyst (traumatic/simple bone cyst) characteristically shows on radiograph:
- (A) Multilocular radiolucency with corticated margins
  - (B) Unilocular radiolucency with scalloping between tooth roots and empty cavity at surgery
  - (C) Dense radiopaque mass
  - (D) Root resorption and periosteal reaction
- Q71.** A lateral radicular cyst develops from:
- (A) The dental follicle of an unerupted tooth
  - (B) The remnants of the dental lamina
  - (C) Cystic degeneration of the stellate reticulum
  - (D) Infection or inflammation stimulating cell rests of Malassez at a lateral root canal
- Q72.** A residual cyst is best defined as:
- (A) A radicular cyst that persists in the jaw after extraction of the offending tooth
  - (B) A dentigerous cyst remnant
  - (C) An odontogenic keratocyst that recurred after treatment
  - (D) A lateral radicular cyst that expanded after root canal therapy



- Q73.** Periapical cemental dysplasia (periapical osseous dysplasia) can mimic a periapical cyst radiographically. The key distinguishing feature is that:
- (A) It is associated with non-vital teeth
  - (B) The affected teeth remain vital and no treatment is required
  - (C) It always requires biopsy for confirmation
  - (D) It occurs exclusively in the maxilla
- Q74.** The globulomaxillary “cyst” (between the maxillary lateral incisor and canine) is now considered:
- (A) A true fissural cyst of developmental origin
  - (B) A nasopalatine duct cyst variant
  - (C) Not a distinct entity; lesions in this area are most often odontogenic cysts (radicular or lateral periodontal cysts)
  - (D) A keratin-filled cyst with unique pathology
- Q75.** The Ackermann classification of unicystic ameloblastoma (UAM) divides it into:
- (A) Solid/multicystic, desmoplastic, and unicystic
  - (B) Follicular, plexiform, and acanthomatous
  - (C) Type I: luminal only; Type II: intraluminal; Type III: mural with mandibular cortex involvement
  - (D) Type I: luminal; Type II: intraluminal; Type III: mural (ameloblastoma in the connective tissue wall)
- Q76.** The treatment of mural unicystic ameloblastoma (Ackermann Type III) differs from luminal UAM in that:
- (A) Mural UAM can be treated by enucleation alone
  - (B) Mural UAM requires more aggressive resection similar to solid ameloblastoma because the tumour has infiltrated the cyst wall
  - (C) Both types are managed identically by marsupialisation
  - (D) Mural UAM is treated by decompression followed by observation



**Q77.** Plexiform ameloblastoma is histologically characterised by:

- (A) Islands of epithelium with peripheral columnar cells and central stellate reticulum-like cells
- (B) Abundant desmoplastic stroma
- (C) Anastomosing strands and networks of odontogenic epithelium with minimal stroma
- (D) Large cystic spaces lined by reduced enamel epithelium

**Q78.** Follicular ameloblastoma histology characteristically shows:

- (A) Islands of odontogenic epithelium with peripheral columnar (ameloblast-like) cells exhibiting reverse polarity, surrounding a central stellate reticulum-like area
- (B) Anastomosing epithelial strands
- (C) Palisaded calcifications and amyloid deposits
- (D) Mucous cell metaplasia

**Q79.** Calcifying epithelial odontogenic tumour (CEOT, Pindborg tumour) is distinguished from other odontogenic tumours by the presence of:

- (A) Ghost cells and dentinoid
- (B) Melanin pigmentation and calcifications
- (C) Mucous cells and salivary acini
- (D) Amyloid-like homogeneous material and Liesegang ring calcifications that stain with Congo red

**Q80.** Clear cell odontogenic carcinoma is significant because:

- (A) It always occurs in the maxilla
- (B) It is benign with no recurrence potential
- (C) It is a rare malignant odontogenic tumour with high rates of local recurrence and metastasis
- (D) It arises exclusively from calcifying odontogenic cysts



- Q81.** Primary intraosseous carcinoma of the jaw is defined as:
- (A) Squamous cell carcinoma of the oral mucosa invading the jaw
  - (B) A squamous cell carcinoma arising within the jaw from odontogenic epithelial remnants, with no connection to the oral mucosa initially
  - (C) Metastatic carcinoma to the jaw
  - (D) Mucoepidermoid carcinoma of the jaw
- Q82.** A young patient presents with a unilocular radiolucency in the posterior mandible associated with an impacted third molar. Histology shows a cystic lining of ameloblastomatous epithelium. The most likely diagnosis is:
- (A) Dentigerous cyst
  - (B) Keratocystic odontogenic tumour
  - (C) Unicystic ameloblastoma
  - (D) Calcifying odontogenic cyst
- Q83.** Laskin's diagnostic criteria for myofascial pain dysfunction (MPD) syndrome include all of the following EXCEPT:
- (A) Unilateral pre-auricular or TMJ pain
  - (B) Bilateral joint space changes on radiograph
  - (C) TMJ or masticatory muscle tenderness on palpation
  - (D) Clicking or popping sounds in the TMJ
- Q84.** The stabilisation (Michigan) splint used in TMJ disorders is designed to:
- (A) Provide an even, bilateral, simultaneous occlusal contact and reduce muscle hyperactivity without permanently altering the occlusion
  - (B) Permanently change the patient's occlusal vertical dimension
  - (C) Reposition the articular disc anteriorly
  - (D) Act as a bite-raising appliance for deep bite correction



- Q85.** TENS (transcutaneous electrical nerve stimulation) is used in TMJ pain management primarily to:
- (A) Provide definitive surgical treatment
  - (B) Increase muscle contraction
  - (C) Modulate pain perception and promote muscle relaxation via endorphin release and gate control
  - (D) Diagnose the source of joint noise
- Q86.** Botulinum toxin injection for masticatory muscle hypertrophy acts by:
- (A) Permanently destroying the neuromuscular junction
  - (B) Reducing inflammation in the muscle
  - (C) Blocking acetylcholinesterase at the motor end plate
  - (D) Inhibiting acetylcholine release at the neuromuscular junction, causing temporary muscle weakness and atrophy
- Q87.** Unilateral condylar hyperplasia is best investigated with:
- (A) MRI of the TMJ
  - (B) Bone scintigraphy (technetium-99m bone scan) to assess activity of the growing condyle
  - (C) CT scan of the mandible
  - (D) Panoramic radiograph alone
- Q88.** Low-dose amitriptyline is used as a pharmacological adjunct in chronic TMJ pain because:
- (A) It is a potent anti-inflammatory agent
  - (B) It blocks dopamine receptors to reduce muscle spasm
  - (C) It cures the underlying disc displacement
  - (D) At low doses it modulates central pain pathways and improves sleep, without being used primarily as an antidepressant



- Q89.** Active jaw stretching exercises are prescribed in TMJ disorders primarily to:
- (A) Strengthen the masseter muscle
  - (B) Increase disc mobility
  - (C) Restore and maintain mandibular range of motion, especially after limited opening due to muscle spasm or adhesions
  - (D) Reduce joint loading
- Q90.** Trigger points in the masseter and temporalis muscles, when palpated, characteristically produce:
- (A) Local oedema and bruising
  - (B) Referred pain to distant sites such as teeth, ear, and temple, reproducing the patient's symptoms
  - (C) Immediate muscle paralysis
  - (D) Increased joint space on MRI
- Q91.** Posterior impaction of the maxilla via Le Fort I osteotomy is indicated in a patient with:
- (A) Maxillary deficiency requiring advancement
  - (B) Vertical maxillary excess with excessive gingival show and deep bite requiring superior repositioning
  - (C) Crossbite requiring widening of the maxilla
  - (D) Mandibular prognathism as the primary deformity
- Q92.** Surgically Assisted Rapid Palatal Expansion (SARPE) is performed instead of orthodontic expansion alone in adults because:
- (A) Adult sutures are wider than in children
  - (B) Orthodontic expansion is contraindicated in adults
  - (C) The midpalatal suture is fused in adults, making orthodontic expansion ineffective and potentially damaging without surgical release
  - (D) Adults require larger expansion forces



- Q93.** Setback of the maxilla via Le Fort I osteotomy is performed for:
- (A) Class III skeletal relationship with maxillary deficiency
  - (B) Class II skeletal relationship due to true maxillary protrusion (prognathism)
  - (C) Open bite correction requiring superior impaction
  - (D) Facial asymmetry due to hemimandibular elongation
- Q94.** Comprehensive presurgical planning for orthognathic surgery requires all of the following EXCEPT:
- (A) Dental study models
  - (B) Cephalometric analysis
  - (C) Photographic analysis
  - (D) Bone scintigraphy as a routine investigation in all patients
- Q95.** After bimaxillary orthognathic surgery, which of the following changes in the tongue and airway is commonly observed?
- (A) Maxillary advancement combined with mandibular advancement increases posterior airway space and may benefit patients with obstructive sleep apnoea
  - (B) The tongue shortens permanently after surgery
  - (C) TMJ loading decreases permanently without any adaptive response
  - (D) Tongue posture is unaffected by orthognathic surgery
- Q96.** The Kazanjian vestibuloplasty technique involves:
- (A) A skin graft placed over the denuded alveolar ridge
  - (B) Apical repositioning of the periosteum with secondary epithelialisation of the raw area
  - (C) Subperiosteal dissection to lower the muscle and mucous membrane attachments, leaving the periosteum exposed for secondary epithelialisation
  - (D) Pedicle mucosal graft from the palate



- Q97.** Distraction osteogenesis is used for implant rehabilitation in the severely atrophic mandible because:
- (A) It is faster than conventional bone grafting
  - (B) It requires no specialised devices
  - (C) It provides only horizontal augmentation
  - (D) It generates new bone and soft tissue simultaneously through gradual osteotomy distraction, avoiding the need for large block grafts
- Q98.** The steroid cover protocol for a patient on long-term corticosteroids undergoing tooth extraction under local anaesthesia (minor procedure) in the dental chair is most appropriately:
- (A) Double the usual morning dose of steroid on the day of the procedure (for patients on low-to-moderate dose); no additional cover usually required for very minor procedures
  - (B) Withhold the usual steroid dose on the day of surgery
  - (C) Administer intravenous hydrocortisone 100 mg regardless of the usual dose
  - (D) No modification of the steroid regimen is required
- Q99.** A patient develops acute bronchospasm in the dental chair. After stopping the triggering agent and sitting the patient upright, the first-line pharmacological treatment is:
- (A) Intravenous aminophylline
  - (B) Salbutamol (albuterol) via pressurised metered-dose inhaler (pMDI) or nebuliser
  - (C) Subcutaneous adrenaline (epinephrine) immediately
  - (D) Oral prednisolone tablets
- Q100.** Which of the following vestibuloplasty techniques uses a split-thickness skin graft to resurface the denuded alveolar ridge?
- (A) Secondary epithelialisation vestibuloplasty



- (B) Kazanjian vestibuloplasty
- (C) Edlan-Mejchar or skin-graft vestibuloplasty
- (D) Lip-switch operation (Obwegeser modification)

Answer: (A)

Answer: (D)

Answer: (B)

Answer: (A)

Answer: (B)

Answer: (C)

Answer: (D)

Answer: (C)

Answer: (C)

Answer: (B)

Answer: (C)

Answer: (B)

Answer: (D)

Answer: (C)

Answer: (A)

Answer: (C)

Answer: (D)

Answer: (B)

Answer: (A)

Answer: (D)

Answer: (B)

Answer: (D)

Answer: (A)

Answer: (D)

Answer: (B)



Answer: (D)

Answer: (C)

Answer: (A)

Answer: (D)

Answer: (B)

Answer: (D)

Answer: (A)

Answer: (C)

Answer: (A)

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Answer: (C)

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Answer: (A)

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Answer: (C)

Answer: (A)

Answer: (D)

Answer: (B)

Answer: (A)

Answer: (B)



Answer: (C)

Answer: (A)

Answer: (D)

Answer: (B)

Answer: (C)

Answer: (D)

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Answer: (C)

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Answer: (C)

Answer: (B)

Answer: (D)

Answer: (A)

Answer: (C)

Answer: (D)

Answer: (A)

Answer: (B)

Answer: (C)

Answer: (A)

The mandibular second molar is the most commonly damaged adjacent tooth during mandibular third molar extraction. Its distal surface is directly in the path of instruments and elevation forces. Mesioangular impactions (especially class II) place the crown of the third molar beneath the contact point, increasing risk of second molar root or crown damage during elevation. [Go Back to Q1](#)

Answer: (D)

In a mesioangular class II impaction, the crown of the mandibular third molar is wedged beneath the contact area of the second molar with its occlusal surface directed mesially. Elevation forces directed toward the second molar can fracture its distal root, cause dentin crazing, or create periodontal defects. This positional relationship is the primary risk factor for second molar damage. [Go Back to Q2](#)

Answer: (B)



Winter's classification describes impaction based on the angulation (direction) of the long axis of the impacted tooth relative to the long axis of the adjacent erupted tooth: mesioangular, distoangular, vertical, horizontal, buccal version, and lingual version. Pell and Gregory describe position (class I/II/III) and depth (A/B/C), while depth classifications describe how far below the occlusal plane the tooth lies. [Go Back to Q3](#)

**Answer: (A)**

Cleidocranial dysplasia (CCD) is an autosomal dominant condition caused by RUNX2 gene mutation characterised by absent or hypoplastic clavicles, open fontanelles, delayed closure of sutures, and multiple supernumerary and impacted permanent teeth. Gardner syndrome (colonic polyposis, osteomas, epidermoid cysts) also has impacted teeth, but CCD is most strongly associated with widespread multiple impactions across all quadrants. [Go Back to Q4](#)

**Answer: (B)**

Gardner syndrome is a variant of familial adenomatous polyposis (FAP) caused by APC gene mutation. It is characterised by colonic polyps (with high malignant potential), osteomas (particularly of the skull and jaws), epidermoid/sebaceous cysts, desmoid tumours, and multiple supernumerary and impacted teeth. Absent clavicles and open fontanelles describe cleidocranial dysplasia; basal cell naevi and bifid ribs describe Gorlin-Goltz syndrome. [Go Back to Q5](#)

**Answer: (C)**

Palatally impacted maxillary canines are managed by surgical exposure of the crown followed by bonded orthodontic traction to guide the tooth into its correct position in the arch. This is the standard treatment for young patients where the canine's root apex is still forming or recently closed. Extraction is reserved for cases where traction is not feasible (ankylosed tooth, unfavourable position, patient refusal). [Go Back to Q6](#)

**Answer: (D)**

In the closed eruption technique, bone is removed to expose the crown of the impacted tooth, an orthodontic bracket (or chain/button) is bonded directly to the enamel, and the mucoperiosteal flap is then completely repositioned and sutured closed over the tooth. Orthodontic traction is then applied through the closed mucosa. This technique preserves the attachment apparatus and provides better aesthetic and periodontal outcomes than open techniques, particularly for labially impacted canines. [Go Back to Q7](#)

**Answer: (C)**

For a labially impacted maxillary canine, the open surgical exposure technique via a labial approach is preferred. A window of mucosa over the impacted crown is excised, bone is removed, and the tooth is either left to erupt spontaneously (if close to eruption) or an orthodontic attachment is bonded and traction applied. The closed technique may also be used labially with good periodontal outcomes. [Go Back to Q8](#)

**Answer: (C)**

In a 10-year-old child, an impacted mandibular second premolar is most often managed conservatively by removing the overlying retained primary second molar to remove the obstruction and



allowing the premolar to erupt spontaneously. This approach is appropriate when sufficient space is available, root development is incomplete, and there is a reasonable eruption path. Regular radiographic monitoring is essential. [Go Back to Q9](#)

**Answer: (B)**

The buccal fat pad (corpus adiposum buccae, Bichat's fat pad) is located in the buccal space and lies in close proximity to the upper third molar region buccally. It may be encountered and even used as a pedicled flap (buccal fat pad flap) for oroantral fistula closure during upper third molar surgery. Care must be taken not to inadvertently incise or damage it during surgical approach. [Go Back to Q10](#)

**Answer: (C)**

The main recognised long-term risks of retaining an asymptomatic impacted mandibular third molar include dentigerous cyst formation around the crown, ameloblastoma (arising from the cyst lining or follicular epithelium), external root resorption of the adjacent second molar, and periodontal pathology (distal pocket on the second molar). Osteosarcoma or aneurysmal bone cysts are not recognized complications of impacted third molars. [Go Back to Q11](#)

**Answer: (B)**

Upper third molar surgery requires anaesthesia of the posterior superior alveolar (PSA) nerve and the palatal nerve. The standard technique is a posterior superior alveolar nerve block (injected above and distal to the last upper molar in the buccal sulcus) combined with a greater palatine or palatal infiltration to cover the palatal aspect. This provides adequate pulpal and soft tissue anaesthesia for the upper third molar region. [Go Back to Q12](#)

**Answer: (D)**

An oroantral communication (OAC) is an acute perforation between the oral cavity and the maxillary sinus immediately after tooth extraction, before epithelialisation occurs – there is no epithelial lining at this stage. An oroantral fistula (OAF) is a chronic tract that has become epithelialised (lined by stratified squamous or respiratory epithelium), persisting for more than 48–72 hours. The distinction is clinically important as OAF requires surgical excision of the epithelial lining plus flap closure. [Go Back to Q13](#)

**Answer: (C)**

The buccal advancement flap (mucoperiosteal flap advanced from the buccal side, or buccal fat pad flap for larger defects) is the most commonly used and preferred technique for OAF closure. It involves excising the fistula tract, elevating a buccally based mucoperiosteal flap, scoring the periosteum to allow advancement without tension, and suturing over the defect. The palatal rotation flap is an alternative for large defects. [Go Back to Q14](#)

**Answer: (A)**

A sinus lift (also called maxillary sinus floor augmentation) is performed to increase the vertical height of available alveolar bone in the posterior maxilla when the maxillary sinus has pneumatized into the ridge following tooth loss, leaving insufficient bone height for implant placement. Bone graft material is placed beneath the elevated Schneiderian membrane through either a lateral window



approach or a crestal (osteotome) technique. [Go Back to Q15](#)

**Answer: (C)**

Controlled force in exodontia means applying steady, progressive, firm, and deliberate forces in controlled directions using the elevator and forceps to expand the alveolar bone, fatigue the periodontal ligament, and deliver the tooth without fracturing the root or causing unnecessary trauma to the alveolar bone, adjacent teeth, or soft tissues. Rapid or uncontrolled force leads to root fracture, bone removal, or adjacent tooth injury. [Go Back to Q16](#)

**Answer: (D)**

The mandibular canine has a single conical root with a tendency for flattening on its mesial and distal surfaces. It is extracted primarily using rotational movements (figure-of-eight rotation around the long axis) combined with buccal and lingual expansive movements. The buccal plate is thin and the rotation helps fatigue the PDL and expand the socket. Purely buccal or lingual forces would risk fracturing the root or adjacent bone. [Go Back to Q17](#)

**Answer: (B)**

Current guidelines (AHA/BNF) recommend amoxicillin 2 g orally taken 30–60 minutes (approximately 1 hour) before the dental procedure for patients at high risk of infective endocarditis (prosthetic heart valves, previous IE, certain congenital heart defects). Clindamycin 600 mg is used if the patient is allergic to penicillin. Post-procedural antibiotics are not required under current evidence. [Go Back to Q18](#)

**Answer: (A)**

When the absolute neutrophil count (ANC) is below 500 cells/mm<sup>3</sup> (severe neutropenia), the patient is at very high risk of serious infection after any surgical procedure including dental extraction. Management requires prophylactic antibiotics (broad-spectrum covering oral flora), haematological consultation, and timing the extraction to coincide with the best haematological status (recovery phase of chemotherapy). Emergency extraction under antibiotic cover can be performed if necessary. [Go Back to Q19](#)

**Answer: (D)**

Extraction of teeth in a field that has received radiotherapy (particularly doses above 50–55 Gy to the jaw) carries a significant risk of osteoradionecrosis (ORN), now classified under medication-related osteonecrosis of the jaw (MRONJ) terminology in some systems, or simply osteoradionecrosis. Radiation causes hypoxic, hypovascular, and hypocellular changes in bone that impair healing. Hyperbaric oxygen (HBO) therapy may be used as an adjunct before and after extraction in irradiated fields. [Go Back to Q20](#)

**Answer: (B)**

Adrenaline (epinephrine) acts as a potent alpha-1 adrenergic agonist causing vasoconstriction. When adrenaline-soaked gauze is placed in the extraction socket and bitten on with pressure, it achieves haemostasis by causing local vasoconstriction of the bleeding vessels in the socket walls. This is useful in patients with minor bleeding disorders or in sockets with persistent oozing after extraction. [Go Back to Q21](#)



**Answer: (D)**

If a root fragment less than 5 mm in size is displaced close to but not into the maxillary sinus floor, is asymptomatic, and the patient has no acute sinusitis, the recommended management is to leave the fragment in situ, thoroughly inform the patient, and conduct radiographic follow-up at intervals. Attempting retrieval risks pushing the fragment into the sinus, causing OAC, or causing more damage than the fragment itself. Larger fragments, those in the sinus, or those causing symptoms require surgical retrieval. [Go Back to Q22](#)

**Answer: (A)**

Serial (sequential) extraction, as described by Kjellgren, involves the planned, timed removal of specific deciduous and permanent teeth in a predetermined sequence to guide the eruption of permanent teeth and relieve crowding, usually beginning around age 8–10. The typical sequence is: extraction of deciduous canines first, then first deciduous molars, then first premolars, allowing the permanent canines to drift into better position. [Go Back to Q23](#)

**Answer: (D)**

An avulsed permanent tooth should ideally be reimplanted immediately at the site of injury. If not possible, it should be stored in a physiological transport medium: milk, saliva (buccal sulcus), Hank's balanced salt solution, or isotonic saline. Tap water is hypotonic and damages the periodontal ligament cells rapidly and is not ideal. Time out of the socket is the most critical factor – the best prognosis occurs with reimplantation within 30–60 minutes. The tooth should not be scrubbed. [Go Back to Q24](#)

**Answer: (B)**

Subluxation is a dental traumatic injury where the tooth is injured (periodontal ligament fibres are torn) causing abnormal mobility and tenderness to percussion, but the tooth remains in its socket without displacement. Luxation injuries (lateral, extrusive, intrusive) involve physical displacement of the tooth from its normal position within the alveolus. Avulsion is complete displacement from the socket. Subluxation does not require extraction. [Go Back to Q25](#)

**Answer: (D)**

The trigeminal nerve (cranial nerve V) has three divisions: V1 (ophthalmic), V2 (maxillary), and V3 (mandibular). V1 exits via the superior orbital fissure, V2 via the foramen rotundum, and V3 via the foramen ovale. All three are relevant in maxillofacial anaesthesia and surgery. The facial nerve (CN VII) is motor to muscles of facial expression and is not a division of the trigeminal. [Go Back to Q26](#)

**Answer: (C)**

The second division (maxillary nerve) block via the pterygopalatine fossa (either the high tuberosity or the greater palatine canal approach) is indicated when: routine infiltration or individual nerve blocks have failed to provide adequate anaesthesia; when widespread anaesthesia of the entire maxilla is required (e.g., extensive surgery); or in patients with inflammatory or anatomical conditions preventing routine injections. [Go Back to Q27](#)

**Answer: (A)**

The auriculotemporal nerve (a branch of the mandibular nerve, V3) provides sensory innervation to the TMJ, the skin anterior to the auricle, the temporal region, and the external auditory meatus. Because it carries sensory fibres from the joint, TMJ pathology may refer pain to the temple, ear, and preauricular region. This is clinically important in differential diagnosis of temporomandibular disorders from ear pathology. [Go Back to Q28](#)

**Answer: (D)**

The chorda tympani is a branch of the facial nerve (CN VII) that carries: (1) special sensory (taste) fibres from the anterior two-thirds of the tongue, and (2) preganglionic parasympathetic fibres to the submandibular ganglion, from which postganglionic fibres supply the submandibular and sublingual salivary glands. It joins the lingual nerve (V3) in the infratemporal fossa and travels with it to the floor of the mouth. [Go Back to Q29](#)

**Answer: (B)**

The Wand (CompuDent/STA system) uses a computer-controlled pump that delivers local anaesthetic at a precisely controlled, slow, constant rate, keeping the pressure below the threshold that activates pain receptors in the tissue. This slow, consistent delivery eliminates the pain caused by rapid pressure buildup during injection. The device allows single tooth anaesthesia (STA) via intraligamentary or AMSA injections. [Go Back to Q30](#)

**Answer: (D)**

DentalVibe and similar devices apply vibration to the mucosa near the injection site. According to the gate control theory of pain (Melzack and Wall), non-noxious stimuli (vibration, light touch, transmitted via large A-beta fibres) can inhibit pain signal transmission in the dorsal horn of the spinal cord/brainstem by activating inhibitory interneurons that “close the gate” to nociceptive input travelling via smaller C and A-delta fibres. [Go Back to Q31](#)

**Answer: (A)**

Nitrous oxide (N<sub>2</sub>O) inhalation sedation provides anxiolysis (reduction of anxiety), mild analgesia, and a pleasant dissociative effect that helps patients cooperate with dental treatment, without causing loss of consciousness. The patient remains responsive and protective reflexes are maintained. Local anaesthesia is still required for pain control during invasive procedures. Recovery is rapid as N<sub>2</sub>O is quickly eliminated via the lungs. [Go Back to Q32](#)

**Answer: (C)**

When administering intravenous sedation with midazolam, the minimum required monitoring includes: continuous pulse oximetry (SpO<sub>2</sub>), non-invasive blood pressure (NIBP) at regular intervals, ECG monitoring, capnography (end-tidal CO<sub>2</sub>) in deeper sedation levels, and continuous clinical observation with verbal contact. This is consistent with guidelines from the Royal College of Surgeons, AAPD, and ANZCA for moderate-to-deep sedation. [Go Back to Q33](#)

**Answer: (A)**

The Bispectral Index (BIS) monitor uses processed electroencephalography (EEG) signals from scalp electrodes to produce a dimensionless number (0–100) that correlates with depth of anaesthesia or sedation. A BIS of 100 represents fully awake; 40–60 represents general anaesthesia; 65–85



represents sedation. It allows anaesthetists to titrate anaesthetic agents to the desired level of consciousness, reducing the risk of awareness under anaesthesia and over-sedation. [Go Back to Q34](#)

**Answer: (B)**

General anaesthesia for dental procedures is a significant undertaking with associated risks and is indicated only when local anaesthesia and sedation techniques are insufficient or contraindicated. A routine single extraction in a healthy cooperative adult is an inappropriate indication as it can easily and safely be performed under local anaesthesia alone. Severely anxious or uncooperative patients, those with significant intellectual disabilities, or those requiring extensive surgical procedures may appropriately require general anaesthesia. [Go Back to Q35](#)

**Answer: (C)**

Moffatt's solution is a topical nasal preparation used to anaesthetise and vasoconstrict the nasal mucosa before nasal endoscopy or nasal intubation. It contains cocaine (provides both anaesthesia and vasoconstriction), sodium bicarbonate (to adjust pH and improve penetration), and adrenaline (additional vasoconstriction). The combination provides excellent topical anaesthesia and haemostasis of the nasal mucosa. [Go Back to Q36](#)

**Answer: (B)**

EMLA (Eutectic Mixture of Local Anaesthetics) cream contains prilocaine 2.5% and lidocaine 2.5% in a eutectic formulation that allows skin or mucosa penetration. It is applied to intact skin or mucosa under occlusion 45–60 minutes before a needle procedure to provide surface anaesthesia. It is particularly valuable in paediatric patients to reduce the pain of venepuncture, port access, or dental injections into mucosal sites. [Go Back to Q37](#)

**Answer: (A)**

Phentolamine mesylate (marketed as OraVerse) is an alpha-adrenergic blocking agent that, when injected into the site of previous local anaesthetic injection, reverses the residual soft tissue numbness (lip, tongue, cheek) by causing vasodilation and increasing blood flow, thereby accelerating removal of the local anaesthetic from the tissue. It approximately halves the duration of soft tissue numbness compared to no reversal agent, which is particularly valuable in children and professionals. [Go Back to Q38](#)

**Answer: (C)**

The nasociliary nerve is a branch of the ophthalmic division (V1) of the trigeminal nerve. Its branch, the infratrochlear nerve, supplies the medial canthus of the eye, the lacrimal sac, and the skin of the side of the nose. The nasociliary nerve also gives the anterior and posterior ethmoidal nerves (supplying the nasal cavity and anterior nasal septum) and long ciliary nerves. These are relevant in anaesthesia for procedures involving the medial orbit and nasal region. [Go Back to Q39](#)

**Answer: (B)**

Low-level laser therapy (LLLT) or photobiomodulation applied before local anaesthetic injection has been shown to modulate nociceptor activity by altering cell membrane permeability, reducing sodium channel excitability, promoting endorphin release, and decreasing inflammatory mediators. This reduces the subjective pain of injection, particularly in paediatric patients. The mechanism is



photochemical rather than thermal. [Go Back to Q40](#)

**Answer: (D)**

The submandibular space is the primary space most commonly involved in lower molar infections. The roots of the lower second and third molars extend below the attachment of the mylohyoid muscle on the inner surface of the mandible, so infection from these teeth drains into the submandibular space rather than the sublingual space. Lower first molar roots are above the mylohyoid attachment and tend to drain into the sublingual space. [Go Back to Q41](#)

**Answer: (A)**

The submental space is bounded by the symphysis of the mandible superiorly, the investing layer of deep cervical fascia inferiorly, and the anterior belly of the digastric muscles laterally. Infections in this space typically arise from the mandibular anterior teeth (incisors), as their apex projects below the mentalis muscle and genial muscles, allowing spread into the submental compartment. [Go Back to Q42](#)

**Answer: (D)**

Ludwig's angina is a rapidly spreading bilateral cellulitis involving the submandibular, sublingual, and submental spaces simultaneously. The condition is characterised by brawny induration (woody hardness) of the floor of the mouth and neck without fluctuation or lymphadenopathy, elevation of the tongue, dysphagia, trismus, and rapid airway compromise. It is a life-threatening condition requiring immediate airway management, surgical drainage, and IV antibiotics. [Go Back to Q43](#)

**Answer: (C)**

Descending necrotizing mediastinitis (DNM) occurs when odontogenic infection descends through fascial planes from the neck into the mediastinum. Despite modern intensive care, aggressive surgical debridement (mediastinotomy/thoracotomy), and broad-spectrum antibiotics, DNM carries a reported mortality rate of approximately 20–40% in most published series. Some older series reported even higher rates. Delayed diagnosis significantly worsens prognosis. [Go Back to Q44](#)

**Answer: (B)**

Necrotizing fasciitis of the head and neck is characterised by rapidly progressing infection along superficial and deep fascial planes. Features include: skin discolouration (bronze/grey), crepitus due to gas-forming organisms, skin necrosis, systemic sepsis, and disproportionate pain or pain followed by relative anaesthesia as nerves are destroyed. Mortality is high (20–40%) even with aggressive surgical debridement and antibiotics. It affects both immunocompromised and immunocompetent patients. [Go Back to Q45](#)

**Answer: (B)**

Crepitus on palpation of a fascial space infection (a crackling sensation under the skin/mucosa) indicates the presence of gas within the tissues, produced by gas-forming organisms. These include Clostridium species (particularly in necrotizing fasciitis), but also gram-negative facultative anaerobes such as Klebsiella, E. coli, and mixed anaerobic infections. This finding indicates a severe, potentially necrotizing infection requiring urgent surgical intervention. [Go Back to Q46](#)

**Answer: (C)**



Brodie abscess is a form of chronic localised osteomyelitis in which a small, well-defined cavity in the medullary bone contains granulation tissue or sterile pus, surrounded by sclerotic reactive bone. It represents a low-grade indolent infection walled off by the host's immune response. Radiographically it appears as a round-to-oval radiolucency with a sclerotic border (penumbra sign), classically described in the metaphysis of long bones but also occurring in the jaws. [Go Back to Q47](#)

**Answer: (C)**

The Zurich classification of osteomyelitis of the jaws (Baltensperger and Eyrich) divides osteomyelitis into: acute osteomyelitis, secondary chronic osteomyelitis (chronic sequela of acute), and primary chronic osteomyelitis (chronic from the onset without a preceding acute phase, including diffuse sclerosing and focal sclerosing variants). "Pharmacological osteomyelitis" is not a category in the Zurich classification; medication-related osteonecrosis of the jaw (MRONJ) is a separate entity. [Go Back to Q48](#)

**Answer: (A)**

Oral hairy leukoplakia (OHL) is a white lesion with a corrugated or "hairy" surface appearance, characteristically occurring on the lateral borders of the tongue in immunocompromised patients (especially HIV-positive). It is caused by Epstein-Barr virus (EBV) replication within the epithelial cells and cannot be wiped off (unlike candidiasis). OHL is an AIDS-defining condition and its presence suggests significant immunosuppression. [Go Back to Q49](#)

**Answer: (D)**

Oral Kaposi sarcoma (KS) in HIV-positive patients most commonly affects the hard palate and gingiva, presenting as reddish-purple, bluish, or brownish macules, plaques, or nodules. The hard palate is the most frequently reported site, followed by the gingiva and tongue. Oral KS may be the first manifestation of AIDS in some patients and is caused by Human Herpesvirus 8 (HHV-8, Kaposi sarcoma-associated herpesvirus). [Go Back to Q50](#)

**Answer: (B)**

The suprahyoid muscles are those muscles above the hyoid bone that form the floor of the mouth and connect the hyoid to the mandible and skull base. They include: mylohyoid, geniohyoid, digastric (anterior belly), and stylohyoid. The omohyoid is an infrahyoid muscle (below the hyoid, connecting the hyoid to the scapula), not a suprahyoid muscle. The infrahyoid (strap) muscles include omohyoid, sternohyoid, sternothyroid, and thyrohyoid. [Go Back to Q51](#)

**Answer: (A)**

The primary airway threat in Ludwig's angina arises from bilateral involvement of the sublingual spaces causing the tongue to be elevated superiorly and displaced posteriorly by the indurated, swollen floor of the mouth. This progressively compromises the oropharyngeal airway. Trismus further limits access for oral intubation. Airway management is the first priority – options include awake fiberoptic intubation, tracheostomy under local anaesthesia, or cricothyroidotomy in extremis. [Go Back to Q52](#)

**Answer: (B)**

Zygomatic complex (tripod/trimalar) fracture typically produces: malar flattening (depression



of the cheekbone), step deformity at the infraorbital rim and zygomaticomaxillary buttress, infraorbital anaesthesia (infraorbital nerve compression), trismus (impingement of the depressed arch on the coronoid process), subconjunctival haemorrhage, and enophthalmos. Proptosis (forward protrusion of the eyeball) is NOT a feature; rather enophthalmos occurs due to increased orbital volume. Proptosis suggests a retrobulbar haematoma, which is a different condition. [Go Back to Q53](#)

**Answer: (C)**

CT scanning with thin-slice axial and coronal images, supplemented by three-dimensional (3D) volumetric reconstruction, is the gold standard for assessment of complex facial fractures. It provides precise information about fracture pattern, fragment displacement, orbital volume changes, intracranial involvement, and allows surgical planning. Plain radiographs (OPG, PA mandible, Water's view) are useful for screening and simple fractures but lack the detail of CT for complex injuries. [Go Back to Q54](#)

**Answer: (A)**

The bottom-up (mandible-first) approach to panfacial fractures is most widely used: the mandible is fixed first to re-establish the lower facial height and occlusion (via intermaxillary fixation and mandibular plating), then the midface (Le Fort levels, zygoma) is reconstructed using the mandible as a stable base, and finally the upper face (frontal bone, supraorbital rim) is addressed. This ensures correct facial proportion, height, and projection. The top-down approach has also been advocated by some, and a combined approach may be used. [Go Back to Q55](#)

**Answer: (D)**

Post-traumatic TMJ ankylosis following condylar fracture is most likely to develop when: the fracture occurs in a child (growing condyle has greater potential for aberrant bone formation); there is associated haemarthrosis (blood in the joint organises and ossifies); and physiotherapy (mouth opening exercises) is not instituted promptly and maintained. Inadequate mobilisation after fracture is the single most preventable cause. Bilateral condylar fractures treated conservatively in children are particularly high risk. [Go Back to Q56](#)

**Answer: (B)**

In a tripod (trimalar) fracture, the three fracture sites are: the zygomaticofrontal suture, the zygomatic arch, and the zygomaticomaxillary buttress with the infraorbital rim. The zygomaticofrontal (ZF) suture is considered the key point for fixation as it is a broad, strong suture whose anatomical reduction accurately repositions the entire zygomatic complex, restoring facial projection and vertical height. It is the most commonly plated site in tripod fractures. However, the ZM buttress provides the greatest stability. [Go Back to Q57](#)

**Answer: (C)**

Most authors recommend an initial conservative period of 10–14 days for isolated orbital floor blowout fractures to allow periorbital oedema and haematoma to resolve before definitive surgical assessment and repair. During this period, the true extent of enophthalmos and diplopia can be reassessed. Indications for earlier surgery include persistent diplopia in primary gaze, significant orbital volume change, or severe enophthalmos. Urgent surgery within 24–48 hours may be required if a “white-eyed blowout” with trapdoor fracture and muscle entrapment is present (especially in



children). [Go Back to Q58](#)

**Answer: (D)**

The frontal sinus has an anterior and a posterior wall. The posterior wall abuts the anterior cranial fossa and the dura. Fractures of the posterior wall risk intracranial complications including CSF leak (rhinorrhoea), meningitis, brain abscess, and mucocele formation if the nasofrontal duct is also damaged. Cranialization (removal of the posterior wall and obliteration of the sinus) is performed to eliminate the potential dead space and protect the intracranial contents by allowing the frontal lobe to fill the space. [Go Back to Q59](#)

**Answer: (B)**

The face has a rich blood supply from multiple anastomosing vessels, which provides exceptional resistance to infection and excellent healing capacity. This allows early primary closure of facial lacerations within 24 hours (even up to 24–48 hours in some clean wounds), unlike lacerations in other body regions where delayed closure may be preferred. Early closure minimises scarring, reduces infection risk, and provides better aesthetic outcomes. Thorough wound irrigation and debridement before closure are essential. [Go Back to Q60](#)

**Answer: (A)**

Enophthalmos (posterior displacement of the eyeball within the orbit) after zygomatic complex fracture results from an increase in the effective orbital volume. When the zygomatic complex is displaced inferolaterally, the floor and medial and lateral walls of the orbit become displaced, expanding the orbital cavity volume. The orbital soft tissues (fat, muscle) remain the same volume but occupy a larger space, causing the globe to sink posteriorly. This may also occur after isolated orbital floor blowout fractures with herniation of orbital fat into the antrum. [Go Back to Q61](#)

**Answer: (D)**

The occipitomental view (Water's view, also called the 15-degree and 30-degree occipitomental view) is the standard plain radiograph for visualising the midface and maxillary sinuses. It projects the dense petrous temporal bones below the maxillary sinuses, providing a clear view of the orbital rims, maxillary sinuses, zygomatic arches, and nasal bones. It is the first-line plain film for suspected midface and zygomatic fractures. Towne's view demonstrates the condylar heads and posterior mandible. [Go Back to Q62](#)

**Answer: (B)**

Trismus (restricted mouth opening) following facial trauma most commonly results from: (1) impingement of a depressed zygomatic arch on the underlying temporalis muscle and coronoid process of the mandible, preventing mandibular movement; or (2) involvement of the masticator (pterygo-mandibular) space by infection or haematoma; or (3) TMJ injury or fracture. Fractures of the frontal bone, nasal bones, and isolated orbital floor typically do not cause trismus. [Go Back to Q63](#)

**Answer: (D)**

A fracture of the anterior wall of the frontal sinus alone (without posterior wall or nasofrontal duct involvement) is treated as a facial bone fracture: open reduction and internal fixation (ORIF) with plates and screws to restore the contour of the forehead and prevent the cosmetic deformity of a



depressed forehead. Cranialization and obliteration are reserved for fractures involving the posterior wall or nasofrontal duct, where intracranial or mucocele complications are a concern. [Go Back to Q64](#)

**Answer: (B)**

The most accepted theory of cyst expansion is the osmotic pressure theory: the cyst lumen accumulates proteins (from desquamated epithelial cells, inflammatory exudate) that create a higher osmotic pressure than surrounding tissue fluid, drawing in water by osmosis and increasing hydrostatic pressure within the cyst. Additionally, prostaglandins (particularly PGE<sub>2</sub>) released by inflammatory cells in the cyst wall stimulate bone resorption, and collagenase (produced by the cyst lining) degrades collagen in the adjacent bone, facilitating expansion. [Go Back to Q65](#)

**Answer: (C)**

Satellite (daughter) cysts are small discrete cyst-like islands of odontogenic epithelium within the fibrous wall of the parent KCOT. They are found in approximately 10–26% of KCOTs. When the main cyst is enucleated, these satellite cysts – which may be microscopic and not visible to the surgeon – remain in the bone and act as foci for cyst regrowth, contributing to the characteristically high recurrence rate of KCOT (25–60% after simple enucleation). This is a major reason for use of adjuncts (Carnoy's solution, peripheral ostectomy) or more aggressive resection. [Go Back to Q66](#)

**Answer: (D)**

Gorlin-Goltz syndrome (naevoid basal cell carcinoma syndrome, NBCCS) is an autosomal dominant condition caused by mutation in the PTCH1 (Patched 1) gene on chromosome 9q22.3, a tumour suppressor gene in the Hedgehog signalling pathway. Features include multiple KCOTs (one of the most important diagnostic features), multiple basal cell carcinomas of the skin, bifid/fused ribs, calcification of the falx cerebri, and various skeletal anomalies. [Go Back to Q67](#)

**Answer: (A)**

Calcifying odontogenic cyst (COC, Gorlin cyst) is characterised histologically by: a lining of ameloblastomatous epithelium (with peripheral columnar cells showing reverse polarity) and ghost cells – aberrant keratinocytes that have lost their nuclei but retain a “shadow” or ghost outline. These ghost cells frequently undergo calcification. The lesion may have a solid component with extensive ghost cell keratinisation (dentinoid matrix may be present in some variants). [Go Back to Q68](#)

**Answer: (D)**

OOC is lined by orthokeratinised (rather than parakeratinised) stratified squamous epithelium with a prominent granular cell layer and a flat epithelial-connective tissue interface (no rete ridges in the typical form). Unlike KCOT, OOC does not show PTCH1 mutations, does not have daughter cysts in the wall, and has a significantly lower recurrence rate after enucleation (less than 2%). It is now classified as a separate entity from KCOT. [Go Back to Q69](#)

**Answer: (B)**

Solitary bone cyst (also called traumatic bone cyst, haemorrhagic bone cyst, or simple bone cyst) presents as a unilocular, well-defined radiolucency in the mandible (usually the body or symphysis), characteristically scalloping upward between the roots of vital teeth. At surgery, the cavity is empty or



contains a small amount of serous/serosanguinous fluid – there is no epithelial lining. Simply opening the cavity provokes haemorrhage which organises and fills the space, leading to resolution in most cases. [Go Back to Q70](#)

**Answer: (D)**

A lateral radicular (lateral periodontal abscess/cyst) forms when inflammation or infection at the apex of a tooth with a lateral (accessory) root canal stimulates the resting cell rests of Malassez (epithelial remnants of Hertwig's root sheath) in the lateral periodontium. The resulting cyst appears as a radiolucency on the lateral surface of the root of a non-vital tooth, rather than at the apex. Treatment involves root canal therapy or surgery (apicoectomy or extraction). [Go Back to Q71](#)

**Answer: (A)**

A residual cyst is a periapical (radicular) cyst that remains in the jaw after extraction of the tooth with which it was associated. The cyst was present before extraction but was not removed or recognised at the time of extraction. It continues to expand as it has an epithelial lining. Radiographically it appears as a well-defined unilocular radiolucency at the site of a previous extraction. Treatment is enucleation. [Go Back to Q72](#)

**Answer: (B)**

Periapical osseous dysplasia (POD, also called periapical cemental dysplasia) is a benign fibro-osseous lesion of the jaws, not a true cyst. It occurs almost exclusively in middle-aged African-American women, typically in the anterior mandible. The key distinguishing feature from a periapical cyst is that the affected teeth are vital (respond positively to pulp testing). POD has characteristic radiographic progression through three stages (osteolytic, then mixed, then mature). No treatment is required; biopsy may be performed to confirm the diagnosis if there is any doubt. [Go Back to Q73](#)

**Answer: (C)**

The globulomaxillary “cyst” was historically described as a fissural cyst arising at the junction of the globular portion of the medial nasal process and the maxillary process. However, current understanding is that this is not a distinct pathological entity – the globulomaxillary suture exists in embryological terms but fissural cysts do not arise from entrapped epithelium at this site. Lesions found in the globulomaxillary region between the upper lateral incisor and canine are most commonly lateral radicular cysts (from non-vital teeth) or lateral periodontal cysts. [Go Back to Q74](#)

**Answer: (D)**

Ackermann et al. classified unicystic ameloblastoma (UAM) into three subtypes based on the relationship between the ameloblastomatous epithelium and the cyst wall: Type I (luminal) – ameloblastoma confined to the luminal surface of the cyst lining; Type II (intraluminal) – tumour growing as a nodule or plaque into the cyst lumen; Type III (mural) – ameloblastoma infiltrating the fibrous cyst wall, with or without luminal involvement. This classification determines treatment: Type I and II can be managed by enucleation; Type III requires resection. [Go Back to Q75](#)

**Answer: (B)**

In mural UAM (Type III), the ameloblastomatous epithelium has infiltrated the fibrous connective tissue wall of the cyst. This means that simple enucleation will leave tumour cells in the surrounding



bone, leading to high recurrence rates similar to solid/multicystic ameloblastoma. Therefore mural UAM is treated more aggressively with resection (peripheral ostectomy, partial jaw resection, or resection with margin), analogous to solid ameloblastoma management. Types I and II carry a much lower recurrence risk and can be treated by enucleation. [Go Back to Q76](#)

**Answer: (C)**

Plexiform ameloblastoma is characterised histologically by anastomosing (interconnecting) strands, cords, and networks of odontogenic epithelium. The epithelial strands are lined by a single layer of cuboidal to columnar ameloblast-like cells, with minimal or scant stroma between the strands. In contrast to follicular ameloblastoma, there are no distinct discrete follicular islands with central stellate reticulum. Plexiform ameloblastoma may undergo cystic degeneration (plexiform unicystic ameloblastoma). [Go Back to Q77](#)

**Answer: (A)**

Follicular ameloblastoma shows discrete islands of odontogenic epithelium within a mature fibrous stroma. Each island has: peripheral columnar ameloblast-like cells with reversed polarity (nuclei displaced away from the basement membrane, toward the centre of the island – known as “reverse polarity”), and a loosely arranged central area resembling stellate reticulum of the enamel organ. Squamous metaplasia (acanthomatous variant) or other changes may be superimposed. [Go Back to Q78](#)

**Answer: (D)**

Calcifying epithelial odontogenic tumour (CEOT), or Pindborg tumour, is histologically characterised by sheets and nests of polyhedral epithelial cells with prominent intercellular bridges, along with: amyloid-like homogeneous eosinophilic material (originally described as amyloid but now considered to be a modified odontogenic protein), calcifications that form concentrically (Liesegang ring calcifications), and Congo red positivity of the amyloid-like material. The calcifications appear as dense opacities on radiograph (“driven snow” appearance). [Go Back to Q79](#)

**Answer: (C)**

Clear cell odontogenic carcinoma (CCOC) is a rare malignant odontogenic neoplasm characterised histologically by sheets of vacuolated clear cells (PAS-positive due to glycogen content), with a fibrous stroma. It has a significant propensity for local recurrence, regional lymph node metastasis, and distant metastasis. It is considered a true odontogenic carcinoma (malignant) and should be treated with wide surgical resection and assessment of the regional lymph nodes. It occurs predominantly in the mandible of older women. [Go Back to Q80](#)

**Answer: (B)**

Primary intraosseous carcinoma (PIOC, or primary intraosseous squamous cell carcinoma) is defined as a squamous cell carcinoma arising centrally within the jawbone from odontogenic epithelial remnants (such as cell rests of Malassez, reduced enamel epithelium, or the lining of odontogenic cysts) that has no initial connection to the oral mucosa. Diagnosis requires exclusion of metastatic carcinoma and invasion from an adjacent mucosal primary. It may arise de novo or from a pre-existing odontogenic cyst (particularly OKC or dentigerous cyst). [Go Back to Q81](#)

**Answer: (C)**



A unilocular radiolucency in the posterior mandible associated with an impacted third molar in a young patient, where histology reveals ameloblastomatous epithelium lining a cystic cavity (with columnar peripheral cells showing reverse polarity), is diagnostic of unicystic ameloblastoma (UAM). This contrasts with dentigerous cyst (which shows non-specific cuboidal epithelial lining without ameloblastomatous features) and KCOT (parakeratinised or orthokeratinised epithelium with a corrugated surface). UAM is the most common form in young patients. [Go Back to Q82](#)

**Answer: (B)**

Laskin's four diagnostic criteria for myofascial pain dysfunction (MPD) syndrome are: (1) unilateral pre-auricular or TMJ pain aggravated by jaw movement; (2) tenderness of one or more masticatory muscles on palpation; (3) clicking, popping, or crepitus in the TMJ on movement; and (4) limitation of mandibular movement and deviation. Critically, Laskin specified that there are no radiographic changes in the TMJ in MPD syndrome – this differentiates it from organic TMJ disease. Bilateral joint changes on radiograph would therefore be an exclusion criterion. [Go Back to Q83](#)

**Answer: (A)**

The stabilisation (or Michigan/Tanner) splint is a hard acrylic device (usually maxillary) designed to provide: even, bilateral, simultaneous posterior tooth contacts in centric relation; anterior guidance (cuspid-guided or group function) during excursive movements; and disocclusion of posterior teeth in eccentric movements. It reduces muscle hyperactivity, redistributes joint loading, and serves as a diagnostic tool. It does NOT permanently alter the occlusion. It is the most commonly prescribed splint for bruxism and generalised TMD symptoms. [Go Back to Q84](#)

**Answer: (C)**

TENS (transcutaneous electrical nerve stimulation) applies low-voltage electrical current through skin electrodes over the painful area. The mechanisms of pain relief include: (1) gate control theory – electrical stimulation activates large A-beta fibres that inhibit nociceptive input; and (2) stimulation of endorphin (enkephalin) release at the spinal cord level, providing diffuse noxious inhibitory control. TENS also promotes muscle relaxation by fatiguing spastic muscles. It is a non-invasive adjunct and does not provide surgical or definitive treatment. [Go Back to Q85](#)

**Answer: (D)**

Botulinum toxin type A (BTX-A, e.g., Botox, Dysport) acts at the neuromuscular junction by irreversibly binding to the presynaptic membrane and inhibiting calcium-dependent exocytosis of acetylcholine-containing vesicles. This prevents neuromuscular transmission, causing temporary chemod-  
enervation and weakness/atrophy of the injected muscle. Effects last 3–6 months until new nerve terminals sprout. In masseteric hypertrophy or bruxism, it reduces muscle bulk, hyperactivity, and associated pain. [Go Back to Q86](#)

**Answer: (B)**

Unilateral condylar hyperplasia (UCH) presents with progressive facial asymmetry (mandibular midline shift, dental crossbite, cant of the occlusal plane, and chin deviation) due to continued excessive growth of one condyle. Bone scintigraphy with technetium-99m-labelled bisphosphonate (bone scan, SPECT) is used to assess the activity of the growing condyle – a “hot” scan (increased tracer uptake) indicates active growth and suggests condylectomy to stop the growth process. A “cold” scan



suggests inactive disease, and orthognathic surgery can proceed. [Go Back to Q87](#)

**Answer: (D)**

Amitriptyline, a tricyclic antidepressant, at low doses (10–25 mg at night, far below antidepressant doses of 75–150 mg/day) exerts its beneficial effects in chronic pain states through: modulation of central pain pathways (inhibiting reuptake of serotonin and noradrenaline, which enhance descending inhibitory pain control), anticholinergic sedative effects that improve sleep architecture, and possibly direct analgesic effects. It is used as an adjunct for chronic TMD with a significant central sensitisation or psychosocial component, not for its antidepressant action at these doses. [Go Back to Q88](#)

**Answer: (C)**

Active and passive jaw-stretching exercises are prescribed as part of the physical therapy component of TMJ disorder management. Their primary purpose is to restore and maintain the full range of mandibular movement (mouth opening, lateral excursion, protrusion) that may be limited by muscle spasm, myofascial trigger points, adhesions within the joint, or post-surgical/post-trauma scarring. Exercises also help break the pain-spasm-pain cycle and are essential for prevention of TMJ ankylosis after condylar fractures. [Go Back to Q89](#)

**Answer: (D)**

Myofascial trigger points are hyperirritable spots within a taut band of skeletal muscle fibres. When palpated, they produce a local twitch response and, importantly, referred pain in a predictable distant pattern that reproduces the patient's symptoms. Trigger points in the masseter refer pain to the teeth (particularly molars and premolars), the ear, and the preauricular region. Temporalis trigger points refer to the temple, supraorbital area, and upper teeth. This referred pain pattern is a hallmark of myofascial pain dysfunction syndrome. [Go Back to Q90](#)

**Answer: (B)**

Superior repositioning (posterior impaction) of the maxilla via Le Fort I osteotomy is performed for vertical maxillary excess (VME, also called “long face syndrome”). In VME, the patient shows excessive gingival display (“gummy smile”) at rest and on smiling, increased lower anterior facial height, and often an open bite or deep bite depending on the vertical pattern. Moving the maxilla superiorly reduces gingival display, closes the open bite or reduces the deep bite, and shortens the lower anterior facial height. [Go Back to Q91](#)

**Answer: (C)**

In adults, the midpalatal suture undergoes complete ossification (synostosis/fusion) typically in the late teens to mid-twenties. Once fused, orthodontic expansion forces applied to the teeth produce tooth tipping and periodontal ligament stretching rather than opening the midpalatal suture. Surgically Assisted Rapid Palatal Expansion (SARPE) involves surgically releasing the midpalatal suture and the surrounding circummaxillary sutures (pterygomaxillary junction, lateral nasal walls) to allow a palatal expander to separate the two maxillary halves and generate new bone in the expanding suture. [Go Back to Q92](#)

**Answer: (B)**



Maxillary setback (posterior movement) via Le Fort I osteotomy is performed for true maxillary prognathism (protrusion), a Class II skeletal relationship where the maxilla is genuinely too far forward. This is relatively uncommon. More commonly, Class II relationships are due to mandibular retrognathia rather than true maxillary protrusion, and are treated by mandibular advancement (BSSO or sagittal split osteotomy). When combined jaw surgery is required, maxillary setback may be combined with mandibular procedures. [Go Back to Q93](#)

**Answer: (D)**

Comprehensive presurgical assessment for orthognathic surgery requires: dental study models (to assess the dental arch relationship, plan the occlusion, and construct surgical wafers), standardised photographic analysis (frontal and profile photographs at rest and smiling), cephalometric analysis (lateral and PA cephalograms to quantify skeletal discrepancies), and CBCT/3D imaging for complex cases. Bone scintigraphy is NOT a routine investigation for all orthognathic patients – it is specifically indicated only when active condylar hyperplasia is suspected to assess condylar growth activity before surgery. [Go Back to Q94](#)

**Answer: (A)**

After bimaxillary surgery combining maxillary advancement (Le Fort I) and mandibular advancement (bilateral sagittal split osteotomy), the posterior airway space (PAS) is typically increased as the tongue (attached to the mandible via genioglossus) and soft palate are moved forward with the skeletal structures. This enlargement of the pharyngeal airway has a therapeutic benefit in patients with obstructive sleep apnoea (OSA). The tongue adapts in posture and function to the new jaw position over weeks to months. [Go Back to Q95](#)

**Answer: (C)**

Kazanjian's vestibuloplasty (also described as secondary epithelialisation vestibuloplasty) involves making an incision in the depth of the vestibule, then dissecting the soft tissues (muscles and mucosa) away from the underlying bone in a subperiosteal or supraperiosteal plane. The muscle and mucosal attachments are repositioned apically, leaving the periosteum exposed over the alveolar bone. The raw periosteal surface is left to heal by secondary (secondary intention) epithelialisation from the wound margins. This deepens the vestibule and lowers muscle attachments. [Go Back to Q96](#)

**Answer: (D)**

Distraction osteogenesis (DO) for alveolar bone augmentation involves performing an osteotomy to create a transport disc, then gradually separating the osteotomised segments (at a rate of approximately 1 mm/day in a latency period + activation + consolidation protocol). The gradual separation stimulates new bone formation (osteogenesis) in the distraction gap and simultaneously generates overlying soft tissue. Advantages over block bone grafting include: no donor site morbidity, simultaneous soft tissue gain, lower infection risk, and the ability to achieve significant vertical augmentation. [Go Back to Q97](#)

**Answer: (A)**

Patients on long-term corticosteroids (more than 5 mg prednisolone/day for more than 3 weeks) may have suppression of the hypothalamic-pituitary-adrenal (HPA) axis and may be unable to mount an adequate cortisol stress response. For a minor procedure under local anaesthesia (low to moderate



surgical stress), current evidence-based guidance suggests that simply doubling the usual morning dose of oral corticosteroid on the day of the procedure is usually adequate for patients on low-to-moderate doses. For very minor procedures, many authorities suggest no supplemental cover is needed beyond the usual dose if the patient is stable and the procedure is truly minor. [Go Back to Q98](#)

**Answer: (B)**

For an acute asthma attack in the dental chair, the management sequence is: stop the dental procedure and remove any triggering agent (latex, scent, stress); sit the patient upright (this reduces the work of breathing); administer 2–4 puffs of a beta-2 agonist bronchodilator – salbutamol (albuterol) via pressurised metered-dose inhaler (pMDI) or nebuliser – as the first-line pharmacological treatment; administer oxygen; and if no response, call emergency services. Subcutaneous adrenaline is reserved for anaphylaxis with bronchospasm, not uncomplicated asthma. [Go Back to Q99](#)

**Answer: (C)**

The Edlan-Mejchar vestibuloplasty, and related skin graft vestibuloplasty techniques, use a split-thickness skin graft harvested from the thigh or another donor site to resurface the denuded alveolar ridge after the mucoperiosteal flaps and muscle attachments have been lowered. This technique creates a wide, keratinised, stable vestibule covered by skin epithelium, which is resistant to relapse. It is particularly useful when there is a severe lack of attached keratinised tissue. The lip-switch procedure (Obwegeser) transposes labial mucosa, while Kazanjian relies on secondary epithelialisation. [Go Back to Q100](#)

