

NEET MDS Oral and Maxillofacial Surgery Sample Paper – 6

Duration: 90 Minutes

Max Marks: 400

Third Molar Impaction

- Q1.** A 22-year-old patient presents with acute pericoronitis around the partially erupted lower left third molar. There is significant pericoronal swelling, pus discharge, and restricted mouth opening. The best immediate management is:
- (A) Immediate surgical removal of the lower left third molar
 - (B) Operculectomy under general anaesthesia
 - (C) Irrigation of the pericoronal flap, antibiotics, and analgesics
 - (D) Extraction of the opposing upper third molar only
- Q2.** In chronic pericoronitis, after the acute phase has fully resolved, the definitive treatment of choice for a mesioangularly impacted mandibular third molar with insufficient space is:
- (A) Operculectomy alone
 - (B) Antibiotic prophylaxis and review
 - (C) Surgical removal of the impacted third molar
 - (D) Orthodontic uprighting and monitoring
- Q3.** Which of the following is NOT a recognised predisposing factor for pericoronitis around a partially erupted mandibular third molar?
- (A) Inadequate retromolar space
 - (B) Food and debris accumulation under the operculum
 - (C) Immunosuppression
 - (D) Presence of a closed apex on the third molar root



- Q4.** A patient with untreated acute pericoronitis presents three weeks later with diffuse swelling, fever, and trismus. The most likely sequela that has developed is:
- (A) Buccal or pterygomandibular space abscess
 - (B) Dentigerous cyst formation
 - (C) External root resorption of the second molar
 - (D) Condensing osteitis
- Q5.** Regarding the superiority of cone-beam computed tomography (CBCT) over an orthopantomogram (OPG) in pre-surgical assessment of impacted mandibular third molars, which statement is MOST accurate?
- (A) CBCT exposes the patient to less radiation than an OPG
 - (B) OPG provides better assessment of the three-dimensional relationship of roots to the IAN canal
 - (C) CBCT is indicated in all cases of third molar removal
 - (D) CBCT allows accurate 3D measurement of the distance between the root apex and the inferior alveolar nerve canal
- Q6.** The current evidence regarding the relationship between mandibular third molar eruption and lower incisor crowding suggests:
- (A) The relationship is controversial; third molars are not a proven independent cause of incisor crowding
 - (B) Third molars are the primary cause of late lower incisor crowding in all patients
 - (C) Prophylactic removal of third molars reliably prevents incisor crowding
 - (D) Impacted third molars exert no mesial force whatsoever on dentition
- Q7.** A follicular space of less than which measurement is considered normal and does not indicate pathological change (such as dentigerous cyst formation) around an impacted mandibular third molar?



- (A) 1 mm
- (B) 3 mm
- (C) 5 mm
- (D) 8 mm

Q8. With respect to age-related outcomes of mandibular third molar removal, which statement is correct?

- (A) Patients over 35 years have faster healing and fewer complications than teenagers
- (B) Root development stage does not influence surgical difficulty
- (C) Younger patients have a higher risk of inferior alveolar nerve paraesthesia than older patients
- (D) Younger patients (under 25 years) generally have better healing and fewer post-operative complications than older patients

Q9. An impacted mandibular third molar with an open (incomplete) root apex compared to one with fully closed roots is generally considered:

- (A) Easier to remove due to smaller root bulk and less dense surrounding bone
- (B) More difficult to remove due to higher risk of root fracture
- (C) More likely to cause inferior alveolar nerve damage
- (D) Equally difficult regardless of apex closure

Q10. The mucoperiosteal flap of choice for surgical removal of a deeply impacted mandibular third molar, providing wide access and avoiding distobuccal nerve injury, is the:

- (A) Envelope flap
- (B) Triangular flap with a mesial vertical relieving incision
- (C) Bayonet (hockey-stick) flap with a distal oblique relieving incision
- (D) Palatal flap



- Q11.** During surgical removal of a mandibular third molar, the lingual nerve is at particular risk when:
- (A) The distal bone cut is made with a high-speed handpiece
 - (B) A lingual split technique or excessive retraction on the lingual side is used
 - (C) A buccal approach with buccal bone removal is employed
 - (D) The patient is positioned supine
- Q12.** A patient involved in a road traffic accident sustains a fracture of the mandible through the socket of a horizontally impacted, partially erupted third molar. The recommended management of the impacted tooth in the fracture line is:
- (A) Remove the tooth if it is interfering with fracture reduction or signs of infection are present
 - (B) Always retain the tooth to preserve bone stock
 - (C) Remove all impacted teeth prophylactically regardless of the fracture
 - (D) Immediate endodontic treatment and retention
- Q13.** Regarding handpiece selection during third molar surgery, the straight (low-speed) handpiece with saline irrigation is preferred over a high-speed air turbine primarily because:
- (A) It prevents surgical emphysema caused by air injection into the wound
 - (B) It provides more torque for sectioning dense bone
 - (C) It is cheaper and more available
 - (D) The bur is longer in a straight handpiece
- Q14.** A 55-year-old patient presents with a retained, asymptomatic, fully impacted mandibular third molar. There are no pathological changes on radiograph. The most appropriate management is:
- (A) Immediate surgical removal due to age-related complications



- (B) Periodic radiographic review, with removal only if pathological changes develop
- (C) Immediate removal due to cancer risk
- (D) Marsupialization of the follicle

Q15. Infection arising from a retained impacted mandibular third molar is MOST likely to spread initially to which space?

- (A) Buccal space
- (B) Sublingual space
- (C) Pterygomandibular space
- (D) Lateral pharyngeal space

Exodontia

Q16. The dental forceps most appropriate for the extraction of a mandibular first premolar is:

- (A) No. 23 (cowhorn) forceps
- (B) No. 151 (universal lower) forceps
- (C) No. 17 (lower molar) forceps
- (D) No. 99C forceps

Q17. A patient with haemophilia A requires extraction of a mandibular molar. The single most important pre-operative step is:

- (A) Prescribing tranexamic acid mouthwash and proceeding immediately
- (B) Administering aspirin to prevent thrombus formation
- (C) Placing a haemostatic pack and suturing prior to extraction
- (D) Arranging Factor VIII replacement therapy to achieve adequate haemostatic levels before extraction

Q18. In patients who have received radiotherapy to the jaws (doses >50 Gy), extraction of a tooth in the irradiated field without prior hyperbaric oxygen (HBO) therapy increases the risk of:



- (A) Dry socket only
- (B) Osteoradionecrosis (ORN)
- (C) Haematoma formation
- (D) Accelerated healing

Q19. A patient on long-term oral bisphosphonate therapy (alendronate for 5 years) requires extraction of a maxillary premolar. The current AAOMS guideline for Stage 0 MRONJ recommends:

- (A) Proceed with extraction with conservative surgical technique; drug holiday is controversial but may be considered for high-risk patients
- (B) Absolute contraindication to any extraction
- (C) Mandatory 3-month drug holiday before extraction
- (D) Immediate referral for hyperbaric oxygen

Q20. The most effective single measure to reduce the incidence of alveolar osteitis (dry socket) following mandibular molar extraction is:

- (A) Packing the socket with Alvogyl immediately after extraction
- (B) Atraumatic extraction technique combined with avoiding smoking post-operatively
- (C) Prescribing systemic antibiotics routinely
- (D) Immediate socket grafting

Q21. Primary closure of an extraction socket is generally contraindicated when:

- (A) The patient is on anticoagulants
- (B) Bone grafting is planned
- (C) The patient is medically compromised
- (D) An acute dentoalveolar abscess with purulent discharge is present, requiring drainage

Q22. When planning multiple extractions in the same appointment, the conventional sequence recommended by most oral surgery texts is:



- (A) Posterior teeth first, then anterior teeth, maxillary before mandibular on each side
- (B) Anterior teeth first to preserve reference points for occlusion
- (C) Mandibular teeth always before maxillary teeth
- (D) Left side always before right side

Q23. A patient with Stage 2 MRONJ (exposed bone with signs of infection) presents for dental management. The most appropriate treatment is:

- (A) Aggressive surgical debridement and immediate reconstruction
- (B) Immediate cessation of bisphosphonate and extraction of all involved teeth
- (C) Antibiotic therapy, chlorhexidine rinses, and conservative debridement; avoid major surgery
- (D) Hyperbaric oxygen as sole therapy

Q24. The maxillary anterior teeth (central and lateral incisors) are most commonly extracted using:

- (A) No. 151 lower universal forceps
- (B) Cowhorn forceps
- (C) Upper straight (No. 1) or upper universal forceps with labial-palatal movements
- (D) No. 17 lower molar forceps

Q25. Which chlorhexidine gluconate regimen has the best evidence for prevention of dry socket?

- (A) 0.12% chlorhexidine rinse used both pre-operatively and post-operatively
- (B) 2% chlorhexidine gel packed into the socket at the time of extraction
- (C) Chlorhexidine-soaked ribbon gauze for 48 hours
- (D) Systemic chlorhexidine tablets

Local Anaesthesia



- Q26.** The mental foramen is most commonly located:
- (A) Below the apex of the mandibular canine
 - (B) Anterior to the mandibular first premolar
 - (C) Below the mesial root of the mandibular first molar
 - (D) Between the apices of the mandibular first and second premolars, at the level of the attached gingiva
- Q27.** An incisive (mental) nerve block provides anaesthesia to all of the following EXCEPT:
- (A) Mandibular premolars
 - (B) Lingual gingiva of mandibular premolars
 - (C) Mandibular anterior teeth
 - (D) Lower lip and chin on the injected side
- Q28.** The most painful intraoral injection in dentistry is generally considered to be:
- (A) Inferior alveolar nerve block
 - (B) Buccal nerve block
 - (C) Nasopalatine (incisive canal) injection
 - (D) Greater palatine injection
- Q29.** The recommended maximum dose of lidocaine (2%) with 1:100,000 adrenaline in a healthy 20 kg paediatric patient is:
- (A) 2.2 mg/kg; approximately 44 mg (equivalent to about 2.2 mL of 2% solution)
 - (B) 4.4 mg/kg without any adrenaline restriction
 - (C) 7 mg/kg as for adults
 - (D) 10 mg/kg because children metabolise drugs faster
- Q30.** Post-injection trismus following an inferior alveolar nerve block is MOST commonly caused by:



- (A) Excessive volume of local anaesthetic
- (B) Accidental injection of adrenaline
- (C) Neurotoxicity of the local anaesthetic solution
- (D) Haematoma formation in the pterygoid muscles

Q31. Tachyphylaxis in the context of local anaesthesia refers to:

- (A) Increased toxicity with repeated injections
- (B) Prolonged duration of anaesthesia with repeated injections
- (C) Diminishing anaesthetic effect with repeated injections of the same dose
- (D) Allergy developing after multiple exposures

Q32. The primary reason that inferior alveolar nerve blocks are often less effective in the presence of acute pulpitis is:

- (A) The inflammatory exudate dilutes the local anaesthetic
- (B) Lowered local tissue pH due to inflammation reduces the proportion of unionised (base) form of LA available for neuronal penetration
- (C) The nerve becomes permanently damaged by infection
- (D) Increased vascularity causes faster absorption of the LA

Q33. A child bites the lower lip severely following an inferior alveolar nerve block for restoration of a mandibular molar. The best preventive measure for the next appointment is:

- (A) Use a shorter-acting local anaesthetic
- (B) Reverse anaesthesia with phentolamine mesylate at the end of the appointment
- (C) Warn the parent and child verbally only
- (D) Both B and verbal warning to parent and patient about avoiding chewing the lip/tongue until anaesthesia wears off

Q34. Which measure is MOST effective in reducing the pain of a palatal injection?



- (A) Injecting rapidly to minimise the duration of the injection
- (B) Applying topical anaesthetic for at least 2 minutes and injecting the solution very slowly
- (C) Using a larger gauge needle
- (D) Warming the cartridge to body temperature alone

Q35. Amide local anaesthetics (e.g., lidocaine, bupivacaine) are primarily metabolised by:

- (A) Hepatic microsomal enzymes (liver)
- (B) Plasma cholinesterase
- (C) Renal excretion unchanged
- (D) Pulmonary enzymes

Q36. During an inferior alveolar nerve block, inadvertent intravascular injection of lidocaine with adrenaline into the inferior alveolar artery MOST immediately produces:

- (A) Prolonged trismus
- (B) Facial palsy due to parotid gland injection
- (C) Sudden tachycardia and pallor due to the intravascular adrenaline
- (D) Permanent nerve damage

Q37. The intraseptal injection technique is primarily used as a:

- (A) Replacement for the inferior alveolar nerve block
- (B) First-line technique in all paediatric patients
- (C) Route for administering antibiotic locally
- (D) Supplemental technique to achieve profound pulpal anaesthesia when conventional block fails

Q38. Variation in mental foramen position in adults includes all of the following EXCEPT:

- (A) Location anterior to the first premolar



- (B) Location on the superior (occlusal) surface of the alveolar crest in edentulous patients
- (C) Posterior position near the first molar in some populations
- (D) Dual or bifid mental foramen

Q39. Rebound pain that occurs after the vasoconstrictive effect of adrenaline wears off is due to:

- (A) Reactive hyperaemia causing increased blood flow, which accelerates removal of residual local anaesthetic
- (B) Neurotoxicity of the local anaesthetic
- (C) Secondary infection
- (D) Histamine release

Q40. When performing a regional nerve block in paediatric patients, compared to adults, which of the following is TRUE?

- (A) A higher volume per injection is required because children have larger nerve trunks
- (B) The same volume as adults is always used
- (C) A lower volume is used; the injection is made more carefully due to smaller anatomical spaces and risk of intravascular injection
- (D) General anaesthesia must always be used instead of regional blocks

Orofacial Infections

Q41. Infection from the maxillary canine is MOST likely to spread to which fascial space?

- (A) Buccal space
- (B) Masticator space
- (C) Sublingual space
- (D) Canine (infraorbital) fossa space

Q42. The buccal space is bounded medially by the buccinator muscle. Its lateral boundary is formed by:



- (A) The masseter muscle
- (B) The medial pterygoid muscle
- (C) The mandibular ramus
- (D) The skin and subcutaneous fascia of the cheek

Q43. During diagnostic aspiration of a suspected deep space infection of the head and neck, frank purulent aspirate indicates:

- (A) The collection is an abscess requiring immediate incision and drainage
- (B) The collection is an early cellulitis manageable with antibiotics alone
- (C) Drainage is contraindicated
- (D) The infection is viral in origin

Q44. The primary airway management concern in Ludwig's angina is:

- (A) Postoperative aspiration
- (B) Bleeding from floor-of-mouth drainage
- (C) Progressive airway compromise requiring early nasotracheal intubation or tracheostomy
- (D) Risk of aspiration of pus during GA induction

Q45. The LRINEC (Laboratory Risk Indicator for Necrotizing Fasciitis) score incorporates which of the following laboratory parameters?

- (A) Platelet count and aPTT
- (B) C-reactive protein, white cell count, haemoglobin, sodium, creatinine, and glucose
- (C) ESR and D-dimer alone
- (D) Procalcitonin and fibrinogen only

Q46. Chronic suppurative osteomyelitis of the mandible must be differentiated radiographically and histologically from which malignancy that can mimic it in young patients?

- (A) Multiple myeloma



- (B) Ewing's sarcoma
- (C) Squamous cell carcinoma
- (D) Langerhans cell histiocytosis

Q47. Bisphosphonate-related osteonecrosis of the jaw (BRONJ/MRONJ) develops primarily because bisphosphonates cause:

- (A) Direct neurotoxicity of the inferior alveolar nerve
- (B) Stimulation of osteoclast activity leading to bone resorption
- (C) Irreversible inhibition of osteoclast-mediated bone resorption, disrupting bone turnover and repair
- (D) Inhibition of platelet aggregation leading to poor wound healing

Q48. Medication-related osteonecrosis of the jaw (MRONJ) has also been associated with anti-angiogenic agents. Which of the following is an example of such an agent?

- (A) Methotrexate
- (B) Prednisone
- (C) Hydroxyurea
- (D) Bevacizumab (anti-VEGF monoclonal antibody)

Q49. In a patient with MRSA-positive dental infection not responding to amoxicillin, the most appropriate antibiotic regimen (for moderate infection) is:

- (A) Continue amoxicillin at a higher dose
- (B) Add metronidazole to amoxicillin
- (C) Refer for systemic vancomycin or use clindamycin/trimethoprim-sulfamethoxazole based on sensitivity
- (D) Prescribe azithromycin

Q50. Ludwig's angina characteristically involves which fascial spaces bilaterally?



- (A) Buccal and masticator spaces
- (B) Lateral pharyngeal and retropharyngeal spaces
- (C) Sublingual, submandibular, and submental spaces
- (D) Pterygomandibular and parapharyngeal spaces

Q51. In an immunocompromised patient (e.g., uncontrolled diabetes or HIV) with a dental abscess, the recommended approach compared to an immunocompetent patient is:

- (A) More aggressive and earlier surgical drainage with broad-spectrum antibiotic cover
- (B) Conservative management with antibiotics alone and defer drainage
- (C) Antifungal therapy as first-line
- (D) Watchful waiting as the immune system will recover

Q52. The periapical abscess of a mandibular second molar typically penetrates the lingual cortex below the mylohyoid line. This results in infection spreading to the:

- (A) Sublingual space
- (B) Buccal space
- (C) Submandibular space
- (D) Pterygomandibular space

Maxillofacial Fractures

Q53. In open reduction and internal fixation of a Le Fort I fracture, titanium plates are placed at the:

- (A) Nasofrontal suture and zygomaticofrontal suture
- (B) Piriform rim (anterior maxilla) and zygomaticomaxillary buttress
- (C) Infraorbital rim and nasal bones
- (D) Zygomaticotemporal suture and zygomatic arch



- Q54.** A Le Fort II fracture is described as a pyramidal fracture. Plates for fixation are placed at the:
- (A) Nasal bones, infraorbital rims, and zygomaticomaxillary buttresses
 - (B) Nasofrontal suture and zygomatic arches
 - (C) Piriform rim and zygomaticofrontal suture
 - (D) Alveolar process only
- Q55.** In Le Fort III (craniofacial dysjunction) fracture, fixation plates are placed at which sites?
- (A) Piriform rim and orbital floor
 - (B) Alveolar process and zygomaticomaxillary buttress
 - (C) Nasal bones and infraorbital rim
 - (D) Zygomaticofrontal suture, zygomaticomaxillary arch, and nasofrontal suture
- Q56.** In the management of panfacial fractures, the general principle of repair sequence is:
- (A) Top-down (cranial to caudal) and centre-out
 - (B) Re-establish the vertical and horizontal facial buttresses, typically starting from the mandible (or cranial base) outward
 - (C) Bottom-up always, starting with the mandible regardless of other injuries
 - (D) Repair soft tissues first before any bony fixation
- Q57.** The mandibular angle is a weak point for fracture partly because:
- (A) It is the widest part of the mandible
 - (B) It lacks cortical bone
 - (C) A partially or fully impacted third molar reduces the bony cross-section at the angle
 - (D) The masseter muscle inserts here and prevents healing



- Q58.** A parasymphysis mandibular fracture in an adult is best managed with:
- (A) Intermaxillary fixation alone for 6 weeks
 - (B) A single lag screw
 - (C) Open reduction and internal fixation with titanium plates (typically bicortical screws below the inferior alveolar canal)
 - (D) External pin fixation
- Q59.** In a child under 12 years with a mandibular fracture, the preferred management is generally:
- (A) Conservative management with Risdon's wiring or Barton's bandage and soft diet due to developing tooth buds
 - (B) Immediate rigid plate fixation identical to adults
 - (C) Condylar replacement with a prosthesis
 - (D) No treatment as all paediatric fractures heal spontaneously
- Q60.** Rigid internal fixation is preferred over semi-rigid fixation in mandibular fractures at which site?
- (A) Condylar intracapsular fractures in children
 - (B) Greenstick fractures
 - (C) Coronoid process fractures
 - (D) Body and parasymphysis fractures in adults requiring early function
- Q61.** A fatigue (stress) fracture of the mandible most commonly occurs in:
- (A) Young athletes after a single impact
 - (B) Elderly edentulous patients with atrophic mandibles under repeated masticatory load
 - (C) Children with developing dentition
 - (D) Patients with acute osteomyelitis
- Q62.** A large segmental defect of the mandible following tumour resection is best reconstructed with:



- (A) A transosseous wire and intermaxillary fixation
- (B) A reconstruction plate (bridging plate) with or without free flap bone
- (C) A simple compression plate
- (D) Immediate denture placement only

Q63. Diplopia and infraorbital hypoesthesia following a midface fracture suggests involvement of:

- (A) The zygomatic arch only
- (B) The mandibular condyle
- (C) The nasal bones
- (D) The orbital floor (blowout) and infraorbital nerve

Q64. In the management of a unilateral subcondylar mandibular fracture in an adult with minimal displacement and maintained occlusion, the recommended approach is:

- (A) Open reduction and internal fixation in all cases
- (B) Condylectomy
- (C) Conservative management with soft diet, physiotherapy, and close follow-up
- (D) External pin fixation

Jaw Cysts

Q65. A primordial cyst (the precursor to the odontogenic keratocyst) arises from:

- (A) The reduced enamel epithelium of an erupted tooth
- (B) The epithelial rests of Malassez
- (C) Epithelial remnants of the dental lamina after tooth formation
- (D) The stellate reticulum of the enamel organ before calcification of the tooth has begun



- Q66.** The main histological feature that differentiates an odontogenic keratocyst (OKC) from a dentigerous cyst is:
- (A) The presence of ghost cells
 - (B) A thick fibrous wall with hyaline bodies
 - (C) Parakeratinised stratified squamous epithelium of uniform thickness with a corrugated surface and a basal layer of palisaded columnar cells
 - (D) Cuboidal non-keratinising epithelium lining
- Q67.** Application of Carnoy's solution to the bony cavity walls after enucleation of an odontogenic keratocyst is intended to:
- (A) Fix and destroy residual epithelial islands and daughter cysts, reducing recurrence rate by approximately 50%
 - (B) Sterilise the cavity against bacterial contamination
 - (C) Promote bone healing by chemical cauterisation
 - (D) Harden the bony walls before grafting
- Q68.** Marsupialization is sometimes performed as a preliminary step before enucleation of a large OKC primarily to:
- (A) Reduce cyst size, decompress the lesion, and allow bone fill before definitive enucleation, lowering the risk of jaw fracture
 - (B) Achieve histological diagnosis
 - (C) Avoid damage to the inferior alveolar nerve permanently
 - (D) Replace the need for enucleation entirely
- Q69.** The glandular odontogenic cyst (sialo-odontogenic cyst) is characterised by which of the following features?
- (A) Unilocular radiolucency with a thin fibrous wall
 - (B) Exclusively seen in the maxilla
 - (C) Non-recurrent after simple enucleation



- (D) Multilocular aggressive jaw lesion lined by epithelium with mucous cells, intraepithelial crypts, and duct-like structures

Q70. A nasopalveolar cyst (Klestadt's cyst) is:

- (A) An intraosseous lesion within the anterior maxilla
- (B) A soft tissue fissural cyst located at the base of the nasal alae near the pyriform aperture, not causing bony expansion
- (C) An odontogenic cyst arising from residual epithelium
- (D) A complication of cleft palate repair

Q71. A sublingual dermoid cyst is clinically described as having a:

- (A) Bluish translucent appearance similar to a ranula
- (B) Firm calcified consistency
- (C) Doughball (putty-like) consistency on palpation
- (D) Pulsatile nature

Q72. A plunging ranula differs from a simple ranula in that:

- (A) It is bilateral
- (B) It herniates through the mylohyoid muscle into the submandibular or neck region
- (C) It communicates with the parotid duct
- (D) It always requires aspiration rather than surgery

Q73. The treatment of choice for a plunging ranula is:

- (A) Aspiration of the mucous content
- (B) Excision of the sublingual gland together with the ranula via an intraoral approach
- (C) Marsupialization alone
- (D) Radiotherapy

Q74. A lateral periodontal cyst arises from which epithelial source?



- (A) Reduced enamel epithelium
- (B) Odontogenic keratocyst lining
- (C) Sinus mucosal epithelium
- (D) Epithelial rests of Malassez in the lateral periodontal ligament

Odontogenic Tumours

- Q75.** Metastatic carcinoma to the jaw bones most commonly originates from which primary sites?
- (A) Colon, prostate, and thyroid
 - (B) Skin melanoma and bladder
 - (C) Cervix and ovary
 - (D) Breast, lung, and kidney; the mandibular molar-angle-ramus region is the most frequent jaw site
- Q76.** Multiple punched-out radiolucent lesions in the jaw bones in association with Bence Jones proteinuria, anaemia, and hypercalcaemia suggests:
- (A) Langerhans cell histiocytosis
 - (B) Metastatic carcinoma
 - (C) Multiple myeloma
 - (D) Cherubism
- Q77.** The key feature that distinguishes ossifying fibroma from fibrous dysplasia on imaging and histology is:
- (A) Ossifying fibroma has a well-defined capsule and a distinct bony margin, whereas fibrous dysplasia merges imperceptibly with surrounding normal bone
 - (B) Fibrous dysplasia is always bilateral
 - (C) Ossifying fibroma shows ground-glass opacity
 - (D) Fibrous dysplasia shows a shepherd's crook deformity of the femur but never affects the jaw



- Q78.** The classic radiographic appearance of fibrous dysplasia of the jaw is:
- (A) Punched-out radiolucencies
 - (B) Ground-glass (orange-peel) appearance with obliteration of the lamina dura
 - (C) Cotton-wool appearance
 - (D) Soap-bubble multilocularity
- Q79.** Paget's disease of bone involving the jaw characteristically produces which combination of radiographic findings?
- (A) Punched-out lucencies with endosteal scalloping
 - (B) Unilocular cyst-like lesion
 - (C) Expansion of the inferior alveolar canal
 - (D) Cotton-wool appearance and hypercementosis of tooth roots
- Q80.** An arteriovenous malformation (AVM) of the jaw is distinguished from a haemangioma as being potentially lethal primarily because:
- (A) AVMs are always larger in size
 - (B) AVM carries high-pressure arterial blood; a biopsy or tooth extraction can cause catastrophic, uncontrollable haemorrhage
 - (C) AVMs are always malignant
 - (D) Haemangiomas involve venous blood only and never cause bleeding
- Q81.** Ameloblastic carcinoma is best described as:
- (A) A rare malignant odontogenic tumour showing histological features of ameloblastoma combined with cytological atypia and metastatic potential
 - (B) A benign ameloblastoma with aggressive local behaviour
 - (C) Synonymous with malignant ameloblastoma (metastatic ameloblastoma)
 - (D) A carcinoma arising from the overlying oral mucosa invading the jaw



- Q82.** Primary central jaw carcinoma (primary intraosseous squamous cell carcinoma) can arise from which pre-existing odontogenic lesion?
- (A) Periapical granuloma
 - (B) Residual cyst
 - (C) Odontogenic keratocyst or dentigerous cyst undergoing malignant transformation
 - (D) Ossifying fibroma

TMJ Disorders

- Q83.** The Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD), developed by Dworkin and LeResche, classifies TMDs into which two axes?
- (A) Axis I: imaging findings; Axis II: clinical examination
 - (B) Axis I: physical diagnoses (muscle, disc, joint); Axis II: pain-related disability and psychological status
 - (C) Axis I: occlusal factors; Axis II: parafunctional habits
 - (D) Axis I: joint sounds; Axis II: mouth opening measurement
- Q84.** Disc displacement with reduction in the TMJ is characterised clinically by:
- (A) Continuous joint pain with no clicking
 - (B) Severely limited mouth opening and no joint sound
 - (C) Reciprocal clicking (click on opening and closing), normal or near-normal mouth opening, and the click disappears in protrusion
 - (D) Crepitus and radiographic evidence of joint degeneration
- Q85.** Crepitus on joint auscultation combined with subcortical bone sclerosis on CBCT of the TMJ is most consistent with:
- (A) Degenerative joint disease (osteoarthritis)
 - (B) Disc displacement with reduction
 - (C) Synovial chondromatosis



(D) Myofascial pain disorder

Q86. Rheumatoid arthritis involving the TMJ characteristically produces which bilateral radiographic and clinical finding?

- (A) Increased condylar size with exostosis
- (B) Bilateral condylar erosion and resorption leading to anterior open bite and retrognathia
- (C) Disc calcification
- (D) Coronoid process enlargement

Q87. Arthrocentesis of the TMJ utilises a two-needle technique. Both needles are placed in the:

- (A) Lower joint compartment below the disc
- (B) Posterior attachment (bilaminar zone)
- (C) Upper joint compartment (between the articular eminence and the superior surface of the disc)
- (D) Parotid capsule adjacent to the joint

Q88. The superior head of the lateral pterygoid muscle is primarily implicated in disc displacement disorders because it:

- (A) Depresses the mandible, pulling the condyle inferiorly
- (B) Protrudes the mandible against joint resistance
- (C) Elevates the coronoid process during closing
- (D) Attaches to the anterior band of the articular disc and pulls it antero-medially during function

Q89. The bimanual manipulation (Farrar) technique is used in the clinical management of:

- (A) Acute dislocation of the TMJ (open lock), to manually guide the condyle back into the glenoid fossa
- (B) Reducing a fractured condylar neck



- (C) Performing arthrocentesis
- (D) Splint fabrication for disc displacement

Q90. Prolotherapy for the TMJ involves:

- (A) Injection of corticosteroid to reduce inflammation
- (B) Injection of an irritant solution (e.g., dextrose) into stretched or lax joint ligaments to stimulate repair and tighten the supporting structures
- (C) Removal of the articular disc
- (D) Injection of hyaluronic acid to lubricate the joint

Orthognathic Surgery

Q91. Surgically assisted rapid palatal expansion (SARPE) is a modification of Le Fort I osteotomy used when:

- (A) The palatal suture is patent and orthodontic RPE is effective
- (B) The patient is under 15 years of age
- (C) Mandibular widening is required
- (D) The midpalatal suture is fused in a skeletally mature adult, making conventional RPE ineffective

Q92. Distraction osteogenesis of the mandible follows which three phases after the osteotomy?

- (A) Latency (bone formation begins), activation (distraction device turned daily), and consolidation (bone matures)
- (B) Activation, latency, and remodelling
- (C) Compression, distraction, and consolidation
- (D) Osteotomy, mobilisation, and fixation

Q93. Distraction osteogenesis of the mandible is particularly useful for the management of:

- (A) Bilateral condylar hyperplasia



- (B) Macrostomia
- (C) Hemifacial microsomia with severe mandibular hypoplasia
- (D) Prognathism

Q94. The normal value of the SNA angle on lateral cephalometry is approximately:

- (A) 75 degrees
- (B) 82 degrees
- (C) 88 degrees
- (D) 90 degrees

Q95. A major advantage of distraction osteogenesis over conventional orthognathic surgery for large mandibular advancements is:

- (A) Shorter overall treatment time
- (B) No need for orthodontic treatment
- (C) Lower cost
- (D) Simultaneous bone lengthening and soft tissue expansion (neuromuscular and mucosal adaptation), reducing the risk of relapse

Preprosthetic Surgery & Medical Emergencies

Q96. Osseointegration, as defined by Branemark, is:

- (A) Fibrous encapsulation of a titanium implant providing stability
- (B) Direct bone-to-implant contact visible only under light microscopy
- (C) Chemical bonding between titanium oxide layer and calcium phosphate
- (D) Direct structural and functional connection between ordered living bone and the surface of a load-carrying implant, observed at the light microscopic level

Q97. Implant-supported overdentures in edentulous patients provide a significant advantage over conventional complete dentures primarily in:



- (A) Improved retention, stability, and masticatory efficiency, with significant positive impact on patient quality of life
- (B) Eliminating the need for any prosthetic superstructure
- (C) Preventing further alveolar bone resorption entirely
- (D) Reducing treatment time compared to complete dentures

Q98. In a two-stage implant protocol (submerged healing), the implant is:

- (A) Immediately loaded with a provisional crown on the day of placement
- (B) Placed and covered with soft tissue for 3–6 months to achieve osseointegration before abutment connection
- (C) Connected to an abutment immediately and loaded within 48 hours
- (D) Placed with simultaneous bone grafting and immediately exposed

Q99. A patient in the dental chair suddenly becomes unable to breathe, points to the throat, and cannot speak or cough after a small instrument is dislodged. After confirming complete foreign body airway obstruction, the immediate management in a conscious adult is:

- (A) Immediate finger sweep and then blow air into mouth
- (B) Place the patient supine and perform CPR
- (C) Perform emergency tracheostomy
- (D) Perform abdominal thrusts (Heimlich manoeuvre) until the object is expelled or the patient loses consciousness

Q100. A patient who received IV sedation with fentanyl for a procedure becomes unresponsive with a respiratory rate of 4 breaths per minute and pinpoint pupils. The specific antidote to be administered immediately is:

- (A) Naloxone (IV/IM), a competitive opioid antagonist
- (B) Flumazenil, a benzodiazepine antagonist
- (C) Adrenaline (epinephrine) IM
- (D) Atropine IV



Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	2	C	3	D	4	A	5	D
6	A	7	B	8	D	9	A	10	C
11	B	12	A	13	A	14	B	15	C
16	B	17	D	18	B	19	A	20	B
21	D	22	A	23	C	24	C	25	A
26	D	27	B	28	C	29	A	30	D
31	C	32	B	33	D	34	B	35	A
36	C	37	D	38	B	39	A	40	C
41	D	42	D	43	A	44	C	45	B
46	B	47	D	48	D	49	C	50	C
51	A	52	C	53	B	54	A	55	D
56	B	57	C	58	C	59	A	60	D
61	B	62	B	63	D	64	C	65	D
66	C	67	A	68	A	69	D	70	B
71	C	72	B	73	B	74	D	75	D
76	C	77	A	78	B	79	D	80	B
81	A	82	C	83	B	84	C	85	A
86	B	87	C	88	D	89	A	90	B
91	D	92	A	93	C	94	B	95	D
96	D	97	A	98	B	99	D	100	A

Go Back to Q1

In acute pericoronitis with pus, swelling, and trismus, the immediate management is conservative: thorough irrigation of the pericoronal space with chlorhexidine or saline, antibiotics (amoxicillin or metronidazole), and analgesics. Surgical removal is deferred until the acute infection resolves. Extracting the opposing upper third molar alone relieves occlusal trauma on the operculum and is an adjunctive step, not the primary management. Operculectomy is used in chronic pericoronitis once the acute phase has settled. The correct answer is C.

Go Back to Q2

Chronic pericoronitis around an impacted mandibular third molar with insufficient space is best managed by surgical removal of the offending tooth once the acute phase has resolved. Operculectomy alone is only appropriate where adequate space for eruption exists. The correct answer is C.

Go Back to Q3

Recognised predisposing factors for pericoronitis include inadequate retromolar space (insufficient room for eruption), food and debris accumulation under the operculum, and immunosuppression (which impairs the host response). The stage of root development (open vs. closed apex) does not predispose to pericoronitis; it relates to surgical difficulty and post-operative healing. The correct answer is D.

Go Back to Q4

Untreated acute pericoronitis can progress to a spreading fascial space infection. The pterygomandibular and buccal spaces are commonly involved, presenting as trismus, swelling, and systemic signs.



Dentigerous cyst formation is a consequence of a retained impacted tooth's follicle, not of untreated pericoronitis per se. The most likely immediate sequela of unresolved pericoronitis is a deep space abscess. The correct answer is **A**.

[Go Back to Q5](#)

CBCT is superior to OPG specifically because it provides three-dimensional information, allowing accurate measurement of the distance between the tooth root and the inferior alveolar nerve canal (IAN) in all planes. OPG is a 2D projection and cannot provide this spatial accuracy. CBCT does expose the patient to more radiation than an OPG and is not indicated in all cases. The correct answer is **D**.

[Go Back to Q6](#)

Decades of research have failed to demonstrate a consistent causal link between mandibular third molar eruption and lower incisor crowding. Late lower incisor crowding is multifactorial (growth, occlusal forces, soft tissue). The evidence does not support prophylactic removal solely to prevent crowding. The correct answer is **A**.

[Go Back to Q7](#)

A follicular (pericoronal) space of less than 3 mm is considered within normal limits and does not indicate pathological change. Spaces exceeding 3–5 mm raise the suspicion for dentigerous cyst formation and warrant further investigation. The correct answer is **B**.

[Go Back to Q8](#)

Clinical studies consistently show that patients under 25 years of age have better healing, lower rates of post-operative complications (dry socket, paraesthesia, infection), and easier surgical procedures compared to older patients. Root development, bone density, and healing capacity are all more favourable in younger patients. The correct answer is **D**.

[Go Back to Q9](#)

An impacted mandibular third molar with an open (incomplete) apex has less developed, smaller, and more tapered roots with thinner dentine walls, making the tooth easier to deliver without root fracture. The surrounding bone is also typically less dense. Closed-apex teeth have longer, divergent, and fully formed roots that are more difficult to remove. The correct answer is **A**.

[Go Back to Q10](#)

The bayonet (hockey-stick) flap, which has a distal horizontal incision curving onto the external oblique ridge with an anterior vertical relieving incision, provides the widest surgical access for deeply impacted lower third molars. The envelope flap provides limited distal access. The triangular flap with a mesial release is also used but is less ideal for very deep impactions. The correct answer is **C**.

[Go Back to Q11](#)

The lingual nerve lies just beneath the lingual periosteum in the retromolar region at the level of the lingual cortex. It is at particular risk when a lingual split technique is employed or when excessive or careless retraction of the lingual tissue is performed during third molar surgery. The correct answer is **B**.

[Go Back to Q12](#)

Current evidence supports a selective approach to third molars in the fracture line. If the tooth is preventing adequate fracture reduction or there are signs of pericoronitis, abscess, or infection,



it should be removed. Retention is appropriate if the tooth is not causing problems and assists in fracture stability. Prophylactic removal of all such teeth is not recommended. The correct answer is **A**.

Go Back to Q13

High-speed air turbines use compressed air to drive the bur, and if used in an oral surgical wound, air can be forced into the soft tissues causing surgical emphysema – a potentially serious complication. Electric or low-speed surgical handpieces with external saline irrigation do not carry this risk and are therefore mandatory for oral surgery. The correct answer is **A**.

Go Back to Q14

In asymptomatic, fully impacted third molars without radiographic pathology in older patients (over 35–40 years), the risk-benefit ratio increasingly favours periodic radiographic surveillance rather than elective prophylactic removal, because the risks of surgery (nerve injury, fracture, prolonged healing) increase with age. The correct answer is **B**.

Go Back to Q15

Infection from a mandibular third molar most commonly spreads into the pterygomandibular space (between the medial pterygoid muscle and the ramus of the mandible), which is in close proximity to the third molar region. This results in trismus. It can subsequently spread to the lateral pharyngeal and other deep neck spaces. The correct answer is **C**.

Go Back to Q16

The No. 151 (lower universal or lower premolar/anterior) forceps is the standard instrument for extracting mandibular premolars. The No. 23 (cowhorn) is used for lower molars with furcation involvement. No. 17 is for lower molars. No. 99C is used for lower wisdom teeth. The correct answer is **B**.

Go Back to Q17

Haemophilia A is a deficiency of Factor VIII. Before any surgical procedure, Factor VIII levels must be raised to a haemostatic level (typically 50–100% of normal) through Factor VIII concentrate infusion, coordinated with a haematologist. Antifibrinolytics (tranexamic acid) are adjuncts, not replacements. The correct answer is **D**.

Go Back to Q18

Radiotherapy causes endarteritis obliterans, reducing vascularity and the ability of bone to heal. Extraction in an irradiated field (especially doses >50 Gy) without adequate preparation leads to osteoradionecrosis (ORN) – a devastating complication of avascular bone necrosis. Hyperbaric oxygen therapy (pre- and post-operatively: 20 sessions before, 10 after) is used to enhance oxygenation and neovascularisation. The correct answer is **B**.

Go Back to Q19

For Stage 0 MRONJ (no exposed bone, only symptoms), the AAOMS position paper recommends proceeding with necessary dental treatment conservatively. A drug holiday (cessation of bisphosphonate) has not been conclusively proven to prevent MRONJ but may be considered in high-risk patients in consultation with the prescribing physician. Absolute contraindication is not the standard of care for Stage 0. The correct answer is **A**.



Go Back to Q20

Dry socket (alveolar osteitis) incidence is significantly reduced by atraumatic extraction technique combined with strict post-operative instructions to avoid smoking (smoking impairs clot stability and local blood flow). Chlorhexidine rinse also has evidence. Routine antibiotics are not recommended for dry socket prevention in healthy patients. The correct answer is **B**.

Go Back to Q21

Primary (tight) closure of a tooth socket is contraindicated when an acute dentoalveolar abscess with active pus drainage is present, because closure traps the infection, converting a freely draining abscess into a closed-space infection. Open healing with secondary intention (or placement of a drain) is preferred. The correct answer is **D**.

Go Back to Q22

The conventional sequence for multiple extractions in one appointment is: posterior teeth before anterior teeth (to prevent loss of occlusal reference points), and maxillary before mandibular (to allow gravity-assisted haemostasis and avoid blood contamination). Upper posterior, lower posterior, upper anterior, lower anterior is a commonly taught sequence. The correct answer is **A**.

Go Back to Q23

Stage 2 MRONJ involves exposed necrotic bone with signs of infection (pain, erythema, purulence). The recommended management is systemic antibiotic therapy, chlorhexidine mouth rinses, and conservative debridement/sequestrectomy. Major surgical resection is reserved for Stage 3. The correct answer is **C**.

Go Back to Q24

Maxillary central and lateral incisors are extracted using upper straight (No. 1) or upper universal anterior forceps. The movement is primarily labial-palatal (luxation) with a rotational component for single-rooted teeth before delivery in a labial direction. The correct answer is **C**.

Go Back to Q25

Systematic reviews show that 0.12% chlorhexidine gluconate rinse used both pre-operatively (immediately before extraction) and post-operatively reduces the incidence of dry socket by approximately 40–50%. The correct answer is **A**.

Go Back to Q26

The mental foramen is most commonly located between the apices of the mandibular first and second premolars, at the level of the attached gingiva. This position varies between populations but the inter-premolar location is the most consistently reported position in anatomical studies. The correct answer is **D**.

Go Back to Q27

The incisive (mental) nerve block anaesthetises the mental nerve (lower lip, chin, and buccal gingiva anterior to the mental foramen) and the incisive branch (mandibular incisors and canines). It does NOT anaesthetise the lingual gingiva, which is supplied by the lingual nerve (a branch of the inferior alveolar nerve not blocked by this technique). The correct answer is **B**.

Go Back to Q28

The nasopalatine (incisive canal) injection is widely regarded as the most painful intraoral injection.



The closely adherent palatal mucosa has minimal submucous tissue, so the injection directly distends the periosteum, causing intense pain. Topical anaesthetic application and slow injection are particularly important here. The correct answer is **C**.

Go Back to Q29

The maximum safe dose of lidocaine with vasoconstrictor in children is 4.4 mg/kg (some sources cite 2.2–4.4 mg/kg with adrenaline). For a 20 kg child at 2.2 mg/kg (conservative paediatric limit): $2.2 \times 20 = 44 \text{ mg} \approx 2.2 \text{ mL}$ of 2% lidocaine. This conservative calculation ensures safety. The correct answer is **A**.

Go Back to Q30

Post-injection trismus after an inferior alveolar nerve block most commonly results from haematoma formation in the medial pterygoid or the pterygomandibular space, caused by inadvertent penetration of the pterygoid venous plexus. The haematoma causes muscle guarding and trismus, which resolves over 1–2 weeks with heat, physiotherapy, and analgesics. The correct answer is **D**.

Go Back to Q31

Tachyphylaxis is the phenomenon of diminishing response (reduced anaesthetic effect) to repeated doses of the same drug administered at short intervals. In local anaesthesia, this is thought to be due to progressive acidification of the tissue (lowering pH) or receptor desensitisation. The correct answer is **C**.

Go Back to Q32

Acute pulpitis creates a local acidic environment (low pH) due to inflammation. Since amide local anaesthetics are weak bases, a lower pH means more molecules are in the ionised (cationic) form, which cannot cross the lipid neuronal membrane to reach the sodium channel receptor. This explains why IANBs frequently fail in teeth with acute pulpitis. The correct answer is **B**.

Go Back to Q33

Phentolamine mesylate (OraVerse) can be injected at the end of the appointment to reverse soft tissue anaesthesia, reducing the risk of self-inflicted trauma from lip or tongue biting in children. Verbal warning to both child and parent is also essential. Both measures together are the most effective preventive strategy. The correct answer is **D**.

Go Back to Q34

Palatal injections are painful primarily because of the tightly adherent mucosa. Applying topical anaesthetic (benzocaine 20%) for at least 2 minutes before injection, and then injecting the solution extremely slowly (over 60 seconds), allows the tissues to accommodate the volume without sharp pain. The correct answer is **B**.

Go Back to Q35

Amide local anaesthetics (lidocaine, bupivacaine, mepivacaine, prilocaine) are metabolised primarily by the hepatic microsomal enzyme system (cytochrome P450). This contrasts with ester LAs (procaine, benzocaine), which are hydrolysed by plasma pseudocholinesterase. Patients with severe liver disease are at risk of amide LA toxicity due to impaired metabolism. The correct answer is **A**.

Go Back to Q36

Inadvertent intravascular injection of a lidocaine-adrenaline cartridge delivers adrenaline directly into



the bloodstream, causing an immediate sympathomimetic response: sudden tachycardia, palpitations, pallor, and anxiety. This is usually transient. Systemic lidocaine toxicity (CNS effects) would require a much larger intravascular dose. The correct answer is **C**.

Go Back to Q37

The intraseptal injection delivers local anaesthetic directly into the interdental septum, achieving rapid pulpal anaesthesia. It is used as a supplemental technique when conventional nerve blocks have failed to achieve profound pulpal anaesthesia, particularly useful in cases with acute pulpitis. The correct answer is **D**.

Go Back to Q38

Variations in mental foramen position include: anterior location (near or anterior to the first premolar), posterior location (near the first molar in some African populations), and dual (bifid) mental foramen. In edentulous patients, as alveolar bone resorbs, the foramen migrates relatively superiorly and may appear on or near the crest of the alveolar ridge – NOT on the occlusal surface, which does not exist in a true anatomical sense. The correct answer is **B**.

Go Back to Q39

Adrenaline in a local anaesthetic cartridge causes local vasoconstriction, reducing blood flow and thus slowing the systemic absorption of the local anaesthetic (prolonging its effect). When the vasoconstrictor effect wears off, reactive hyperaemia ensues – increased local blood flow rapidly removes residual local anaesthetic from the injection site, causing rebound pain or shortened duration of anaesthesia. The correct answer is **A**.

Go Back to Q40

In paediatric patients, smaller anatomical spaces (e.g., pterygomandibular space) mean that the same volume as in adults is not required. Smaller volumes (0.5–1.0 mL) are used to achieve adequate nerve block while minimising the risk of intravascular injection and staying within dose limits based on body weight. The correct answer is **C**.

Go Back to Q41

The maxillary canine (and sometimes the lateral incisor) has a long root apex that may perforate the canine fossa – a shallow depression on the anterior surface of the maxilla above the canine root. Infection tracking through this thin bone enters the infraorbital (canine) space, producing swelling of the cheek and infraorbital region that can obliterate the nasolabial fold. The correct answer is **D**.

Go Back to Q42

The buccal space is a potential fascial space with the following boundaries: medially – buccinator muscle; laterally – skin and subcutaneous fascia of the cheek; superiorly – zygomatic arch; inferiorly – inferior border of the mandible. The masseter muscle forms the posterior boundary. The correct answer is **D**.

Go Back to Q43

Diagnostic aspiration is performed before incision. Frank purulent aspirate confirms an abscess (a collection of pus), which requires incision and drainage. A serosanguinous (blood-tinged serous) aspirate indicates early cellulitis without pus collection, manageable with antibiotics. No aspirate suggests either a solid mass or incorrect needle placement. The correct answer is **A**.



Go Back to Q44

Ludwig's angina causes woody, brawny swelling of the floor of the mouth and submandibular spaces bilaterally, with progressive elevation and posterior displacement of the tongue. The primary threat is airway compromise. Early awake fibre-optic nasotracheal intubation is preferred; if intubation fails or the airway is already severely compromised, emergency tracheostomy under local anaesthesia is performed. The correct answer is **C**.

Go Back to Q45

The LRINEC score uses six laboratory parameters: C-reactive protein (>150 mg/L = 4 points), white blood cell count ($>15 \times 10^9$ /L = 1 point, $>25 \times 10^9$ /L = 2 points), haemoglobin (<135 g/L = 1 point, <110 g/L = 2 points), sodium (<135 mmol/L = 2 points), creatinine (>141 μ mol/L = 2 points), and glucose (>10 mmol/L = 1 point). A score ≥ 6 suggests necrotising fasciitis. The correct answer is **B**.

Go Back to Q46

Ewing's sarcoma classically occurs in young patients (10–25 years), commonly in the mandibular body, and can present with pain, swelling, trismus, and periosteal reaction mimicking osteomyelitis. Histologically, it shows sheets of small round blue cells. Both conditions can show a “moth-eaten” bone pattern on imaging. Biopsy and immunohistochemistry are essential for differentiation. The correct answer is **B**.

Go Back to Q47

Bisphosphonates are potent, irreversible inhibitors of osteoclast-mediated bone resorption. They become incorporated into bone mineral and persist for years. By preventing normal bone turnover (remodelling), the ability of the jaw to repair micro-damage from masticatory trauma or heal extraction sockets is severely impaired, leading to avascular osteonecrosis. The correct answer is **D**.

Go Back to Q48

Bevacizumab is a monoclonal antibody targeting vascular endothelial growth factor (VEGF), thereby inhibiting angiogenesis (new blood vessel formation). Anti-VEGF therapy can cause MRONJ by impairing the vascularity needed for bone turnover and healing, independently of bisphosphonate use. The correct answer is **D**.

Go Back to Q49

MRSA (methicillin-resistant *Staphylococcus aureus*) is resistant to all beta-lactam antibiotics including amoxicillin. For moderate MRSA-positive infection, systemic vancomycin (IV for severe cases) or oral agents with demonstrated MRSA activity such as clindamycin, trimethoprim-sulfamethoxazole, or doxycycline (based on sensitivity testing) are used. The correct answer is **C**.

Go Back to Q50

Ludwig's angina is defined as a bilateral, rapidly spreading, gangrenous cellulitis involving the submandibular, sublingual, and submental spaces simultaneously. All three spaces on both sides of the midline are involved by definition, producing the characteristic board-like (“woody brawny”) induration. The correct answer is **C**.

Go Back to Q51

Immunocompromised patients (e.g., diabetics with HbA1c $>9\%$, HIV patients with CD4 <200) have



impaired inflammatory and immune responses, so dental infections can spread rapidly and become life-threatening. Early and aggressive surgical drainage combined with broad-spectrum IV antibiotics is mandatory; watchful waiting or antibiotics alone is dangerous in this population. The correct answer is **A**.

[Go Back to Q52](#)

The roots of the mandibular second (and first) molar apices lie below the mylohyoid line in most individuals. When infection perforates the lingual cortex below the mylohyoid muscle attachment, it enters the submandibular space (which lies lateral and inferior to the mylohyoid). Infection above the mylohyoid muscle would enter the sublingual space. The correct answer is **C**.

[Go Back to Q53](#)

Le Fort I osteotomy creates a horizontal separation at the base of the maxilla. Fixation plates are placed at the two strongest buttresses accessible after this osteotomy: the piriform rim (nasomaxillary buttress) anteriorly and the zygomaticomaxillary buttress posteriorly, typically using L-shaped or straight titanium mini-plates with two screws above and below the osteotomy line on each side. The correct answer is **B**.

[Go Back to Q54](#)

Le Fort II (pyramidal) fracture traverses the nasal bones superiorly, the infraorbital rims laterally, and the zygomaticomaxillary buttresses inferolaterally. Plates for rigid fixation are placed at the nasal bones, infraorbital rims, and zygomaticomaxillary buttresses to re-establish the pyramidal structure of the middle third of the face. The correct answer is **A**.

[Go Back to Q55](#)

Le Fort III (craniofacial dysjunction) separates the entire facial skeleton from the cranial base. The fracture traverses the zygomaticofrontal sutures, the orbital floors, and the nasofrontal suture. Fixation plates are placed at the zygomaticofrontal sutures, across the zygomatic arches, and at the nasofrontal suture to reattach the facial skeleton to the cranium. The correct answer is **D**.

[Go Back to Q56](#)

The management of panfacial fractures follows the principle of reconstructing the facial buttresses (vertical: nasomaxillary, zygomaticomaxillary, pterygomaxillary; horizontal: upper, middle, lower transverse). The sequence typically begins by establishing the mandibular (and/or cranial base) reference, then working outward to reconstruct height, width, and projection of the facial skeleton. The correct answer is **B**.

[Go Back to Q57](#)

The mandibular angle region is structurally weak for several reasons: the cross-sectional area of bone is reduced when a partially or fully impacted third molar is present (the socket/follicle replaces solid bone); the angle is subjected to bending and torsional forces during mastication; and the divergent muscle pull (masseter and medial pterygoid) creates unfavourable stress distribution. The correct answer is **C**.

[Go Back to Q58](#)

Parasymphysis (between the mental foramen and symphysis) fractures in adults are managed by open reduction and internal fixation. Two titanium plates are typically used (superior and inferior), with



bicortical screws placed below the root apices and above the inferior alveolar canal, to neutralise both bending and torsional forces at this functionally critical site. The correct answer is **C**.

[Go Back to Q59](#)

In children, rigid plate fixation risks damage to developing tooth germs and growth disturbance. Conservative management with Risdon's wiring (circumferential wiring around the lower teeth), Barton's bandage (head bandage to immobilise the mandible), and a soft diet is preferred for minimally displaced fractures. More displaced fractures may require minimal fixation with arch bars and IMF, avoiding plates where possible. The correct answer is **A**.

[Go Back to Q60](#)

Body and parasymphysis fractures in adults are subject to significant functional loading (biting forces) and require rigid internal fixation with titanium plates to allow early mobilisation and function without fibrous union. Semi-rigid fixation (e.g., single small plate) may be adequate for less loaded sites (symphysis, angle with inferior border plate only). The correct answer is **D**.

[Go Back to Q61](#)

Fatigue (pathological) fractures from repeated low-load stress occur in structurally compromised bone. In the jaw, this most commonly affects elderly edentulous patients with severely atrophic mandibles, where the residual bone cross-section is insufficient to withstand even normal masticatory forces. The correct answer is **B**.

[Go Back to Q62](#)

Large segmental mandibular defects (after tumour resection, osteomyelitis, or trauma) require a reconstruction (bridging) plate to maintain mandibular continuity, form, and function. This plate spans the defect and is fixed to the intact proximal and distal mandibular stumps. Definitive reconstruction with a free vascularised bone flap (fibula, iliac crest) may be performed simultaneously or secondarily. The correct answer is **B**.

[Go Back to Q63](#)

Diplopia (double vision) following midface trauma indicates orbital floor disruption (blowout fracture) with entrapment or oedema of the inferior rectus or inferior oblique muscle. Infraorbital hypoesthesia (numbness of the cheek, upper lip, and lateral nose) results from injury to the infraorbital nerve as it runs in the infraorbital canal in the orbital floor/zygomaticomaxillary complex. The correct answer is **D**.

[Go Back to Q64](#)

A unilateral subcondylar fracture in an adult with minimal displacement and maintained occlusion (no open bite, no significant functional deficit) is best managed conservatively. This involves a soft diet, analgesics, guided active physiotherapy to maintain range of motion, and close clinical and radiographic follow-up. Open reduction is reserved for bilateral condylar fractures with open bite, displacement into the middle cranial fossa, or cases where conservative management fails. The correct answer is **C**.

[Go Back to Q65](#)

A primordial cyst arises from the degeneration and cystic transformation of the stellate reticulum of the enamel organ before the hard tissues of the tooth are formed. If the enamel organ undergoes cystic



change after calcification begins, a dentigerous cyst would form around the crown. The primordial cyst develops in place of a tooth and is considered the classic origin of many odontogenic keratocysts. The correct answer is **D**.

[Go Back to Q66](#)

The OKC is characterised by a thin, regular, parakeratinised stratified squamous epithelium (6–8 cell layers), a flat epithelial-connective tissue interface (no rete ridges), a palisaded layer of tall columnar basal cells with hyperchromatic nuclei, and a corrugated (wavy) surface with parakeratotic cells. This uniform, distinct lining with daughter cysts (satellite cysts) in the wall is the hallmark. The correct answer is **C**.

[Go Back to Q67](#)

Carnoy's solution (absolute alcohol, chloroform, glacial acetic acid, and ferric chloride) is a tissue fixative applied to the bony walls after OKC enucleation. It penetrates superficially (1–1.5 mm) and destroys residual OKC epithelium, daughter cysts, and satellite cysts left in the bone. Studies have shown Carnoy's application reduces OKC recurrence from approximately 25–60% (enucleation alone) to 1–8%. The correct answer is **A**.

[Go Back to Q68](#)

Marsupialization (creating a window in the cyst and suturing the lining to the oral mucosa to create a continuous cavity open to the oral environment) decompresses a large OKC over several months. The reduction in cyst size and increase in surrounding bone density makes subsequent enucleation safer, reducing the risk of pathological jaw fracture, inferior alveolar nerve injury, and damage to adjacent tooth roots. The correct answer is **A**.

[Go Back to Q69](#)

The glandular odontogenic cyst (sialo-odontogenic cyst) is a rare but aggressive jaw lesion with a multilocular radiographic appearance. Histologically, it is lined by squamous or cuboidal epithelium with mucous (goblet) cells, intraepithelial crypts and duct-like structures, and papillary surface projections. It occurs predominantly in the anterior mandible in middle-aged adults and has a significant recurrence rate requiring wide excision. The correct answer is **D**.

[Go Back to Q70](#)

A nasoalveolar (nasolabial) cyst (Klestadt's cyst) is a non-odontogenic, soft tissue fissural cyst. It develops at the junction of the globular, lateral nasal, and maxillary processes near the base of the nasal ala, adjacent to the pyriform aperture. It does not cause intraosseous bony changes (no radiographic lesion), presenting as a soft tissue swelling that obliterates the nasolabial fold and may bulge into the floor of the nose. The correct answer is **B**.

[Go Back to Q71](#)

A sublingual dermoid cyst contains epithelium with dermal appendages (hair follicles, sebaceous glands, sweat glands) and is filled with sebaceous material (keratin debris and fat). This gives it a characteristic doughball or putty-like consistency on palpation – it holds the imprint of the examining finger. This distinguishes it from a ranula, which is fluctuant and transilluminates. The correct answer is **C**.

[Go Back to Q72](#)



A plunging (cervical) ranula occurs when the mucus extravasation pseudocyst from the sublingual gland herniates or dissects through a hiatus or defect in the mylohyoid muscle, extending into the submandibular triangle or the neck. It presents as both an intraoral sublingual swelling and a cervical swelling. The correct answer is **B**.

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The definitive treatment for a plunging ranula is excision of the sublingual gland (the source of the mucus leak) along with removal of the ranula via an intraoral approach. Simple marsupialization has an unacceptably high recurrence rate for plunging ranulas. Excision of the gland removes the source and prevents recurrence. The correct answer is **B**.

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The lateral periodontal cyst arises from proliferation and cystic degeneration of the epithelial rests of Malassez (remnants of Hertwig's epithelial root sheath) within the lateral periodontal ligament. It appears as a small, unilocular radiolucency on the lateral aspect of a tooth root in a vital tooth, most commonly in the mandibular premolar-canine region. The correct answer is **D**.

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Metastatic carcinoma to the jaws most frequently originates from breast (most common in females), lung, and kidney. In men, prostate and lung are common sources. The mandible (particularly the posterior body, angle, and ramus region) is far more commonly involved than the maxilla, due to its greater content of red (haematopoietic) marrow. The correct answer is **D**.

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Multiple myeloma is a plasma cell malignancy characterised by multiple punched-out radiolucent lesions (no sclerotic border) in the skull and jaws, Bence Jones proteinuria (immunoglobulin light chains in urine), anaemia, hypercalcaemia, and raised serum protein. The "punched-out" lesions result from osteoclast activation by myeloma cells. The correct answer is **C**.

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The critical distinguishing feature is the presence of a well-defined capsule and distinct bony boundary in ossifying fibroma (allowing complete enucleation), whereas fibrous dysplasia merges imperceptibly with surrounding normal bone (no capsule), making its surgical margins ill-defined. Ossifying fibroma is usually unilateral, well-demarcated, and can be shelled out; fibrous dysplasia requires contouring. The correct answer is **A**.

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Fibrous dysplasia of the jaw produces a characteristic ground-glass (orange-peel or frosted-glass) radiographic appearance due to the replacement of normal trabecular bone by fibrous tissue containing irregularly arranged woven bone trabeculae. The lamina dura around involved teeth is typically obliterated. The correct answer is **B**.

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Paget's disease of bone (osteitis deformans) involving the jaw produces a pathognomonic cotton-wool radiographic appearance (alternating areas of lysis and sclerosis) and hypercementosis (excessive cementum deposition on tooth roots). Serum alkaline phosphatase is markedly elevated. These findings together are virtually diagnostic of Paget's disease. The correct answer is **D**.



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Arteriovenous malformations (AVMs) contain high-pressure arterial blood flowing directly into venous channels. Any surgical intervention – including biopsy, tooth extraction, or even probing – can rupture these vessels and cause massive, potentially fatal haemorrhage that is extremely difficult to control intraoperatively. Haemangiomas contain low-pressure venous blood and are managed differently. The correct answer is **B**.

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Ameloblastic carcinoma is a rare malignant odontogenic tumour that retains the architectural features of ameloblastoma but with cytological features of malignancy (nuclear pleomorphism, increased mitoses, necrosis) and the ability to metastasize. It is distinguished from “metastasising (malignant) ameloblastoma,” which shows benign histology despite metastasis. The correct answer is **A**.

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Primary intraosseous squamous cell carcinoma (PIOSCC) can arise de novo from odontogenic epithelial rests within the jaw, or from malignant transformation of the epithelial lining of an odontogenic keratocyst or dentigerous cyst. The OKC lining, with its higher proliferative activity and genetic instability, has a recognised (though rare) potential for squamous cell carcinoma transformation. The correct answer is **C**.

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The RDC/TMD (1992) by Dworkin and LeResche is a dual-axis classification: Axis I provides physical diagnoses in three groups (Group I: muscle disorders; Group II: disc displacements; Group III: other joint conditions including arthralgia, arthritis, arthrosis). Axis II assesses pain-related disability (graded chronic pain scale) and psychosocial functioning. This biopsychosocial model has become the standard research diagnostic framework for TMDs. The correct answer is **B**.

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In disc displacement with reduction, the anteriorly displaced disc reduces (snaps back onto the condyle) during mouth opening, producing a click. There is typically a second click on closing as the disc slips forward again (reciprocal click). Mouth opening is usually normal or near-normal. The click disappears when the mandible is protruded because the disc is already in a forward position and the condyle does not need to “jump” over it. The correct answer is **C**.

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Crepitus (a grating or grinding sound/sensation) on joint movement indicates surface irregularity of the articular structures, which in the TMJ is characteristic of degenerative joint disease (osteoarthritis). CBCT findings of subcortical bone sclerosis, condylar flattening, erosion, or osteophyte formation confirm the diagnosis. The correct answer is **A**.

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Rheumatoid arthritis (RA) causes bilateral, symmetrical erosive arthritis. In the TMJ, progressive condylar erosion and resorption lead to loss of condylar height. As the posterior vertical facial height decreases bilaterally, the mandible rotates posteroinferiorly, creating a characteristic anterior open bite and retrognathia. This is a recognised, albeit uncommon, manifestation of RA in the TMJ. The correct answer is **B**.



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Arthrocentesis of the TMJ using the Nitzan two-needle technique places both needles in the upper joint compartment (the space between the articular eminence/temporal fossa and the superior surface of the disc). The posterior needle is the outflow needle and the anterior needle provides inflow irrigation. This compartment is targeted because most disc-related pathology (disc displacement, adhesions) involves the upper compartment. The correct answer is **C**.

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The superior head of the lateral pterygoid muscle has dual insertions: into the pterygoid fovea of the condyle and into the anteromedial aspect of the articular disc. During function (especially protrusion and eccentric movements), the superior head contracts and pulls the disc anteromedially. Chronic hyperactivity or spasm of this muscle head is implicated in the pathogenesis of anterior disc displacement. The correct answer is **D**.

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Acute dislocation of the TMJ (open lock, where the condyle is locked anterior to the articular eminence) is reduced by the bimanual manipulation technique. The clinician places bilateral thumbs on the lower molar region, depresses the mandible downward and forward, then guides it backward and upward into the glenoid fossa. Local anaesthetic and muscle relaxants may facilitate reduction. The correct answer is **A**.

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Prolotherapy involves the injection of a proliferant (irritant) solution – most commonly hypertonic dextrose (12.5–25%) – into lax or stretched ligaments and joint capsule. The mild inflammatory response stimulated by the irritant promotes fibroblast proliferation, collagen synthesis, and ligament tightening. In the TMJ, it is used for hypermobility and chronic dislocation related to ligamentous laxity. The correct answer is **B**.

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In skeletally mature adults, the midpalatal suture is fully fused and cannot be expanded by orthodontic rapid palatal expansion (RPE) alone. Surgically assisted rapid palatal expansion (SARPE) involves performing a Le Fort I osteotomy (or segmental cuts) to release the suture surgically, combined with a distraction device (palatal expander), allowing transverse maxillary widening. The correct answer is **D**.

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Distraction osteogenesis follows three sequential phases after the osteotomy: (1) Latency period (5–7 days) – the osteotomy site heals with early callus formation and vascularity develops; (2) Activation period – the distraction device is turned (typically 0.5–1 mm/day) to gradually separate the bony segments, with new bone (callotaxis) forming between them; (3) Consolidation period – the distraction device is left in situ while the new bone mineralises and matures. The correct answer is **A**.

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Hemifacial microsomia involves congenital underdevelopment of one side of the face, primarily affecting the mandible, ear, and soft tissues. The mandibular hypoplasia can be severe, and distraction osteogenesis of the hypoplastic mandibular ramus and body allows gradual, controlled lengthening while simultaneously accommodating growth of the soft tissues (muscle, skin, nerve), which cannot



be achieved with acute surgical advancement. The correct answer is **C**.

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Standard cephalometric norms: $SNA = 82^\circ$ (indicates the anteroposterior position of the maxilla relative to the cranial base); $SNB = 80^\circ$ (mandible position); $ANB = 2^\circ$ (sagittal jaw relationship – positive values indicate Class II, negative values Class III tendency). These values were established by Steiner from Downs' original work. The correct answer is **B**.

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A major limitation of conventional orthognathic surgery for large mandibular advancements ($>8-10$ mm) is significant relapse due to soft tissue tension (muscles, mucosa) resisting the acute skeletal change. Distraction osteogenesis avoids this by gradually advancing the bone over weeks, allowing simultaneous adaptive elongation of muscles, nerves, skin, and mucosa – eliminating the primary cause of surgical relapse and enabling larger advancements. The correct answer is **D**.

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Per Branemark's original definition (1985), osseointegration is: "A direct structural and functional connection between ordered, living bone and the surface of a load-carrying implant." This is defined at the light microscopic level (not electron microscopy) and implies direct bone-to-implant contact without an intervening fibrous tissue layer. The correct answer is **D**.

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Implant-supported overdentures provide markedly improved retention (the prosthesis "snaps" onto the implants) and stability (resistance to dislodgement during function) compared to conventional complete dentures relying on mucosal suction and adhesion. Patients report significantly improved chewing efficiency, confidence, and quality of life. The McGill consensus (2002) stated that two-implant mandibular overdentures should be the minimum standard of care for edentulous patients. The correct answer is **A**.

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In the classic two-stage (submerged) implant protocol described by Branemark, the implant is placed at stage 1 and the cover screw is tightened to close the implant. The soft tissue is sutured over it, and the implant is left undisturbed and unloaded for 3–6 months (mandible: 3 months; maxilla: 6 months) to allow osseointegration. At stage 2, the implant is uncovered, a healing abutment placed, and the prosthetic phase begins. The correct answer is **B**.

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A complete foreign body airway obstruction in a conscious adult (inability to speak, cough, or breathe – the "silent choking" sign) is an immediate life-threatening emergency. The Heimlich manoeuvre (abdominal thrusts) is performed: stand behind the patient, make a fist, place it above the navel and below the xiphoid, and deliver sharp upward thrusts to increase intrathoracic pressure and eject the foreign body. Continue until expelled or the patient loses consciousness, then commence CPR. The correct answer is **D**.

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The triad of opioid overdose is: respiratory depression (rate $<12/\text{min}$), pinpoint (miotic) pupils, and reduced consciousness. Naloxone is a competitive opioid receptor antagonist that reverses all opioid



effects within 1–2 minutes when administered IV (0.4–2 mg), IM, or intranasally. It has a shorter half-life than most opioids, so repeat dosing or an infusion may be needed. Flumazenil reverses benzodiazepines, not opioids. The correct answer is A.

