How many primary (deciduous) teeth are there?

20 teeth – 10 in each arch (no premolars).

How many permanent teeth are there in a full adult dentition?

32 teeth – including 3 molars per quadrant.

Which teeth are present in the permanent dentition but absent in the deciduous dentition?

Premolars and third molars.

What is the dental formula for permanent teeth?

2-1-2-3 per quadrant: Incisor, Canine, Premolar, Molar.

At what age does the first permanent molar usually erupt?

Around age 6.

Which permanent tooth is most commonly affected by early decay?

First permanent molar – due to early eruption and deep fissures.

What is enamel composed of?

96% inorganic hydroxyapatite crystals – hardest tissue in the body.

What is dentine composed of?

70% mineral, 20% organic, 10% water – living tissue sensitive to stimuli.

What cells form dentine?

Odontoblasts – line the pulp chamber.

What is cementum?

Bone-like tissue covering the tooth root – anchors fibres of the periodontal ligament.

What structure attaches the tooth to the alveolar bone?

Periodontal ligament (PDL).

What is the function of the periodontal ligament?

Shock absorption, attachment, and sensory feedback.

What is the pulp?

Soft tissue in the tooth’s centre containing nerves, blood vessels, and connective tissue.

Which structure surrounds and protects the alveolar bone?

Gingiva (gums).

What is the function of the alveolar bone?

Supports and anchors teeth within the jaws.

What are the two main parts of a tooth?

Crown and root.

What is the name of the natural junction between enamel and cementum?

Cementoenamel junction (CEJ).

What are the four main supporting tissues of a tooth?

Enamel, Dentine, Cementum, and Pulp (collectively called the periodontium when including PDL and bone).

What is the oral vestibule?

The space between lips/cheeks and the teeth.

What is the oral cavity proper?

Area inside the teeth extending to the oropharynx.

What are the five tooth surfaces?

Mesial, Distal, Buccal (or Labial), Lingual (or Palatal), and Occlusal (or Incisal).

What does the term ‘mesial’ mean?

Surface toward the midline of the dental arch.

What does the term ‘distal’ mean?

Surface away from the midline.

What does ‘buccal’ refer to?

Surface facing the cheeks – posterior teeth.

What does ‘labial’ refer to?

Surface facing the lips – anterior teeth.

What does ‘lingual’ refer to?

Surface facing the tongue – lower teeth.

What does ‘palatal’ refer to?

Surface facing the palate – upper teeth.

What is the occlusal surface?

Chewing surface of posterior teeth.

What is the incisal edge?

Cutting edge of anterior teeth.

What is the Universal dental numbering system used for?

Used internationally to identify each tooth with a unique number (1–32).

What is the Palmer notation system?

Uses quadrant symbols (┘ └┐ ┌) with numbers 1–8 for each quadrant.

What is the FDI two-digit notation system?

First digit = quadrant, second = tooth position (e.g., 11 = UR1, 36 = LL6).

Which tooth is FDI notation 26?

Upper left first molar.

What is mixed dentition?

Stage when both primary and permanent teeth are present (approx. 6–12 years).

What is the sequence of eruption for primary teeth?

Central incisor → lateral incisor → first molar → canine → second molar.

At what age do the permanent canines erupt?

Between 9–12 years (maxillary later than mandibular).

What is occlusion?

The way upper and lower teeth meet when the mouth closes.

What is normal (Class I) occlusion?

Upper teeth slightly overlap lower teeth; mesiobuccal cusp of UL6 aligns with buccal groove of LL6.

What is Class II occlusion?

Upper teeth positioned forward of lower teeth (retrognathic profile).

What is Class III occlusion?

Lower teeth positioned ahead of upper teeth (prognathic profile).

What is the main function of incisors?

Cutting or incising food.

How many incisors are there in each arch?

Four – two central and two lateral.

Which incisor has the widest crown mesiodistally?

Maxillary central incisor.

Which incisor is most likely to have a deep lingual fossa (palatal pit)?

Maxillary lateral incisor.

What is the main function of canines?

Tearing and guiding jaw movement.

How many canines are there in total?

Four – one in each quadrant.

Which tooth has the longest root in the mouth?

Maxillary canine.

What is the main function of premolars?

Crushing and tearing food during chewing.

How many premolars are in the permanent dentition?

Eight – two in each quadrant.

Which premolar often has two roots?

Maxillary first premolar.

What is the main function of molars?

Grinding food.

How many cusps does an upper molar typically have?

Four cusps – mesiobuccal, distobuccal, mesiolingual, distolingual.

How many roots does an upper molar have?

Three roots – two buccal and one palatal.

How many roots does a lower molar have?

Two roots – one mesial, one distal.

Which tooth is most likely to show the ‘Y-shaped’ fissure pattern?

Mandibular second premolar.

Which permanent tooth has the largest crown?

Mandibular first molar.

Which tooth has the smallest crown in the permanent dentition?

Mandibular central incisor.

Which tooth is most likely to be congenitally missing?

Maxillary lateral incisor or third molar.

What are mamelons?

Rounded enamel ridges on newly erupted incisors – wear away with function.

What is the cingulum?

Raised convex area on the lingual surface of anterior teeth.

What does the term “periodontium” refer to?

The supporting structures of the teeth – gingiva, PDL, cementum, and alveolar bone.

What is the main function of the periodontium?

Support, protection, and attachment of teeth in the jaws.

What is the gingival sulcus?

The shallow groove between the tooth and free gingiva.

What is attached gingiva?

Firmly bound to the underlying bone and resistant to trauma.

What is oral mucosa?

The moist lining of the mouth composed of epithelial tissue.

Name the three types of oral mucosa.

Masticatory, lining, and specialised mucosa.

Where is masticatory mucosa found?

Gingiva and hard palate – keratinised and tough.

Where is lining mucosa found?

Cheeks, lips, floor of mouth, soft palate – non-keratinised and flexible.

Where is specialised mucosa found?

On the dorsum of the tongue – contains taste buds and papillae.

Name the four types of papillae on the tongue.

Filiform, Fungiform, Circumvallate, and Foliate.

Which papillae contain most taste buds?

Fungiform and Circumvallate papillae.

What nerve supplies general sensation to the anterior two-thirds of the tongue?

Lingual nerve (branch of mandibular V3).

What nerve supplies taste to the anterior two-thirds of the tongue?

Chorda tympani (branch of facial nerve).

What nerve supplies the posterior third of the tongue?

Glossopharyngeal nerve (CN IX).

What is the frenulum of the tongue?

Fold of mucous membrane connecting tongue to the floor of the mouth.

What is ankyloglossia?

Tongue-tie – short frenulum restricting tongue movement.

What forms the hard palate?

Palatine processes of maxilla and horizontal plates of palatine bones.

What forms the soft palate?

Muscular posterior portion of the palate.

What is the uvula?

Midline projection from the soft palate aiding speech and swallowing.

Where does the parotid duct open in the mouth?

Opposite the upper second molar.

Where does the submandibular duct open?

At the sublingual caruncle under the tongue.

What is the role of saliva in oral health?

Lubricates tissues, neutralises acids, aids digestion, and protects enamel.

What is the function of the tongue in dentistry?

Speech, swallowing, taste, and helps control saliva and instrument access.

Why is understanding oral anatomy essential for dental nurses?

Ensures safe, accurate assistance during clinical, radiographic, and surgical procedures.