

Nelson: Dental Anatomy, Physiology, and Occlusion, 9th Edition

Chapter 01: Introduction to Dental Anatomy

Test Bank

MULTIPLE CHOICE

1) The dental formula for the primary/deciduous teeth in humans is which of the following?

- A. $I\ 2/2\ C\ 1/1\ M\ 2/2 = 10$
- B. $I\ 2/2\ C\ 1/1\ P\ 1/1\ M\ 2/2 = 12$
- C. $I\ 2/2\ C\ 2/2\ M\ 2/2 = 12$
- D. $I\ 2/2\ C\ 1/1\ P\ 1/1\ M\ 1/1 = 10$

ANS: A

The formula for the primary/deciduous teeth in humans is: Incisors, two maxillary and two mandibular; canines, one maxillary and one mandibular; molars, two maxillary and two mandibular. This makes 10 total teeth on each side, left or right.

REF: Nomenclature, pg. 2

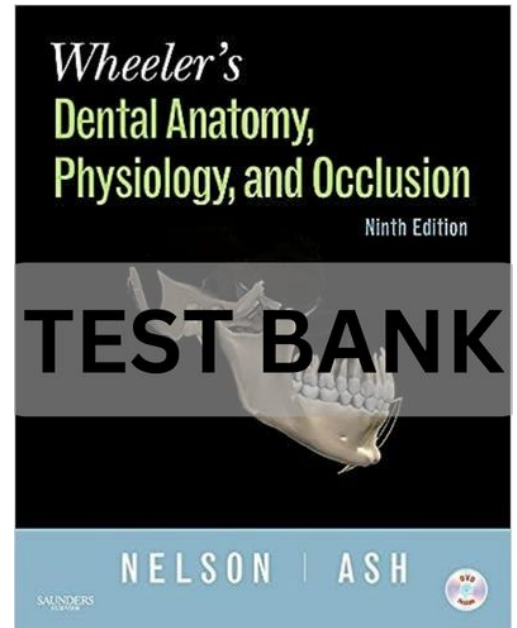
2) The dental formula for the permanent human dentition is which of the following?

- A. $I\ 2/2\ C\ 1/1\ M\ 2/2 = 10$
- B. $I\ 2/2\ C\ 1/1\ P\ 1/1\ M\ 2/2 = 12$
- C. $I\ 2/2\ C\ 1/1\ P\ 2/2\ M\ 2/2 = 14$
- D. $I\ 2/2\ C\ 1/1\ P\ 2/2\ M\ 3/3 = 16$

ANS: D

The formula for the permanent teeth in humans is: Incisors, two maxillary and two mandibular; canines, one maxillary and one mandibular; premolars, two maxillary and two mandibular; molars, three maxillary and three mandibular. This makes 16 total teeth on each side, left or right.

REF: Nomenclature, pg. 2



3) The notation for the primary maxillary left lateral incisor is which of the following according to the Universal system?

- A. D
- B. G
- C. E
- D. F

ANS: B

According to the Universal system of notation, upper case letters are used for each of the primary teeth. Maxillary teeth start with the right second molar and use letters A through J. The mandibular teeth start with the left mandibular second molar and use letters K through T.

REF: Tooth Numbering Systems, pg. 3

4) The notation for the permanent mandibular right first premolar is which of the following according to the Universal system?

- A. 20
- B. 21
- C. 28
- D. 29

ANS: C

According to the Universal system of notation, numbers 1 through 32 are used to designate the permanent teeth. The system begins with the maxillary right third molar as 1 and continues to the maxillary left third molar as 16. It continues with the mandibular left third molar as 17 and ends with the mandibular right third molar as 32.

REF: Tooth Numbering Systems, pg. 4

5) The notation for the primary mandibular left canine is which of the following according to the FDI system?

- A. 53
- B. 63
- C. 73
- D. 83

ANS: C

The FDI system utilized a two-number system of nomenclature. The following applies in the primary dentition: for the first of the two digits, numeral 5 indicated the maxillary right, 6 the maxillary left, 7 the mandibular left, and 8 the mandibular right. The second digit represented the tooth number for each side starting from the central incisors and continuing back.

REF: Tooth Numbering Systems, pg. 4

6) The notation for the permanent maxillary right first molar is which of the following according to the FDI system?

- A. 16
- B. 26
- C. 35
- D. 45

ANS: A

The FDI system utilized a two-number system of nomenclature. The following applies in the permanent dentition: for the first of the two digits, numeral 1 indicated the maxillary right, 2 the maxillary left, 3 the mandibular left, and 4 the mandibular right. The second digit represented the tooth number for each side starting from the central incisors and continuing back.

REF: Tooth Numbering Systems, pg. 4

7) Which of the following tissues found in teeth is responsible for furnishing blood and nerve supply to the tooth?

- A. Enamel
- B. Cementum
- C. Dentin
- D. Pulp

ANS: D

Answers A, B, and C are known as "hard" tissues. Pulp is the only "soft" tissue that comprises tooth structure. It is responsible for blood and nerve supply to the tooth.

REF: The Crown and Root, pg. 4

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- 8) Which of the following represents the name of the bone of the tooth socket that firmly fixes each tooth root?
- A. Alveolar process
 - B. Alveolus
 - C. Cementoenamel junction
 - D. Dentinoenamel junction

ANS: B

The alveolar process is the portion of the jaw supporting the teeth. The cementoenamel junction and dentinoenamel junction are both areas of the tooth itself where two different tissues join. The alveolus specifically refers to the bone of the tooth socket.

REF: The Crown and Root, pg. 5

- 9) Which of the following terms represents the surface of a tooth that is facing toward an adjoining tooth in the same dental arch?
- A. Occlusal
 - B. Incisal
 - C. Facial
 - D. Proximal

ANS: D

The occlusal and incisal surfaces are those that come in contact with those in the opposite jaw during the act of closure in the molar and premolars, and the incisors and canines, respectively. The facial surface is the collective term used for tooth surfaces that face the cheeks and lips.

REF: Surfaces and Ridges, pg. 6

- 10) Which of the following pairs of teeth have mesial surfaces that touch each other (Universal system)?
- A. 7 and 8
 - B. 8 and 9
 - C. 22 and 23
 - D. 25 and 26

ANS: B

Only four teeth have mesial surfaces that contact each other, the maxillary and mandibular central incisors. Teeth number 8 and 9 are maxillary central incisors.

REF: Surfaces and Ridges, pg. 6

11) Which of the following is considered a "posterior" tooth?

- A. Central incisor
- B. Canine
- C. First premolar
- D. Lateral incisor

ANS: C

Premolars and molars are grouped as posterior teeth; central and lateral incisors and canines are grouped as anterior teeth.

REF: Surfaces and Ridges, pg. 6

12) A _____ is the lingual lobe of an anterior tooth.

- A. Cingulum
- B. Cusp
- C. Tubercle
- D. Marginal ridge

ANS: A

A cingulum is the lingual lobe of an anterior tooth. A cusp is an elevation or mound on the crown portion of a tooth making up a divisional part of the occlusal surface. A tubercle is a smaller elevation on some portion of the crown produced by an extra formation of enamel. Marginal ridges are rounded borders of the enamel that form the mesial and distal margins of the occlusal surfaces of premolars and molars and lingual surfaces of incisors and canines.

REF: Other Landmarks, pg. 7

13) _____ descend from the tips of the cusps of molars and premolars toward the central part of the occlusal surfaces.

- A. Marginal ridges

- B. Triangular ridges
- C. Oblique ridges
- D. Developmental grooves

ANS: B

Triangular ridges descend from the tips of the cusps of molars and premolars toward the central part of the occlusal surfaces. Marginal ridges are rounded borders of the enamel that form the mesial and distal margins of the occlusal surfaces of premolars and molars and lingual surfaces of incisors and canines. Oblique ridges cross obliquely from the triangular ridge of the distobuccal cusp and the distal cusp ridge of the mesiolingual cusp of maxillary first molars. Developmental grooves are shallow grooves or lines between the primary parts of the crown or root.

REF: Other Landmarks, pg. 8

14) _____ cross from the triangular ridge of the distobuccal cusp and the distal cusp ridge of the mesiolingual cusp of maxillary first molars.

- A. Marginal ridges
- B. Triangular ridges
- C. Oblique ridges
- D. Developmental grooves

ANS: C

Oblique ridges cross obliquely from the triangular ridge of the distobuccal cusp and the distal cusp ridge of the mesiolingual cusp of maxillary first molars. Triangular ridges descend from the tips of the cusps of molars and premolars toward the central part of the occlusal surfaces. Marginal ridges are rounded borders of the enamel that form the mesial and distal margins of the occlusal surfaces of premolars and molars and lingual surfaces of incisors and canines. Developmental grooves are shallow grooves or lines between the primary parts of the crown or root.

REF: Other Landmarks, pg. 8

15) A _____ is a pinpoint depression located at the junction of developmental grooves.

- A. Pit
- B. Fossa
- C. Sulcus
- D. Cusp

ANS: A

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Pits are small, pinpoint depressions located at the junction of developmental grooves or at terminals of those grooves. A fossa is an irregular depression or cavity. A sulcus is a long depression or valley in the surface of a tooth between ridges and cusps. A cusp is an elevation or mound on the crown portion of a tooth.

REF: Other Landmarks, pg. 9

16) A _____ is any one of the three rounded protuberances found on the incisal ridges of newly erupted incisor teeth.

- A. Lobe
- B. Mamelon
- C. Cusp
- D. Supplemental groove

ANS: B

A mamelon is specifically any one of the three rounded protuberances on a newly erupted incisor. A lobe is one of the primary sections of formation in the development of the crown. Cusps are elevations or mounds on the crown portion of canines or posterior teeth. A supplemental groove is a shallow linear depression on the surface of a tooth.

REF: Other Landmarks, pg. 9

17) Which of the following is formed by the junction of two surfaces and derives its name from the combination of the two surfaces that join?

- A. Line angle
- B. Point angle
- C. Sulcus
- D. Marginal ridge

ANS: A

A line angle forms from the junction of two surfaces. A point angle is formed by the junction of three surfaces. A sulcus is a long depression or valley in the surface of a tooth between ridges and cusps. Marginal ridges are rounded borders of the enamel that form the mesial and distal margins of the occlusal surfaces of premolars and molars and lingual surfaces of incisors and canines.

REF: Division into Thirds, Line Angles and Point Angles, pg. 9

18) Which of the following is formed by the junction of three surfaces and derives its name from the combination of the three surfaces that join?

- A. Line angle
- B. Point angle
- C. Sulcus
- D. Marginal ridge

ANS: B

A point angle is formed by the junction of three surfaces. A line angle forms from the junction of two surfaces. A sulcus is a long depression or valley in the surface of a tooth between ridges and cusps. Marginal ridges are rounded borders of the enamel that form the mesial and distal margins of the occlusal surfaces of premolars and molars and lingual surfaces of incisors and canines.

REF: Division into Thirds, Line Angles and Point Angles, pg. 10

19) Which of the following is not a line angle of the anterior teeth?

- A. Mesiolabial
- B. Distolingual
- C. Distolabial
- D. Disto-occlusal

ANS: D

The disto-occlusal is a line angle of posterior teeth. All of the other choices are line angles found on anterior teeth.

REF: Division into Thirds, Line Angles, and Point Angles, pg. 10

20) Which of the following is a point angle of the posterior teeth?

- A. Mesiolabioincisal
- B. Distolinguoincisal
- C. Distobucco-occlusal
- D. Disto-occlusal

ANS: C

The distobucco-occlusal is a point angle of posterior teeth. Mesiolabioincisal and distolinguoincisal are point angles of anterior teeth. Disto-occlusal is a line angle of posterior teeth.

REF: Division into Thirds, Line Angles, and Point Angles, pg. 10

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Chapter 02: Development and Eruption of the Teeth

Test Bank

MULTIPLE CHOICE

1) Which of the following mean ages (in months) best represents when the primary maxillary canines begin eruption?

- A. 10
- B. 16
- C. 19
- D. 29

ANS: C

Based on the chronology of primary teeth, maxillary canines tend to erupt around 19 months of age. See table 2-1.

REF: Chronology of Primary Dentition, Table 2-1, pg. 23

2) Which of the following best represents the order of emergence of permanent teeth from earliest to latest eruption (Universal system of numbering)?

- A. 19, 8, 5, 11
- B. 8, 19, 5, 11
- C. 8, 5, 19, 11
- D. 19, 5, 11, 8

ANS: A

According to the normal chronology, #19 erupts at 6 to 7 yrs, #8 erupts at 7 to 8 yrs, #5 erupts at 10 to 11 yrs, and #11 erupts at 11 to 12 yrs.

REF: Chronology of Primary Dentition, Table 2-2, pg. 31

- 3) **Statement 1:** Groups of teeth develop at specific rates so that the sequence of eruption and emergence of the primary teeth is well defined with few deviations.
Statement 2: For the individual child, considerable variation in the times of emergence of the primary dentition may occur.
- A. Statement 1 and 2 are true as written.
 - B. Statement 1 is true while Statement 2 is false as written.
 - C. Statement 1 is false while Statement 2 is true as written.
 - D. Statement 1 and 2 are false as written.

ANS: A

Both of these statements are correct. Over a large distribution, a well-defined eruption pattern is known. However, each individual child may differ greatly from the norm.

REF: Primary Teeth, pg. 24

- 4) The normal age range of the primary dentition from complete formation to complete loss is which of the following?
- A. 1 to 7 years
 - B. 1 to 11 years
 - C. 3 to 7 years
 - D. 3 to 11 years

ANS: D

Primary dentition is usually completed by age 3 and functions for a relatively short time before it is lost completely by about age 11.

REF: Primary Teeth, pg. 25

- 5) Calcification of the primary teeth begins in utero from _____ weeks postfertilization.
- A. 10 to 12
 - B. 13 to 16
 - C. 16 to 18
 - D. 18 to 20