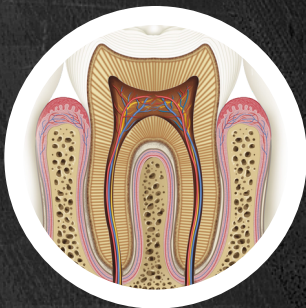
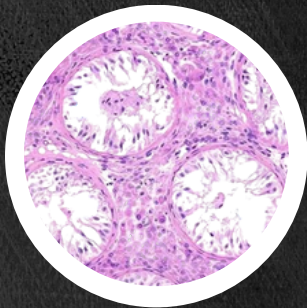
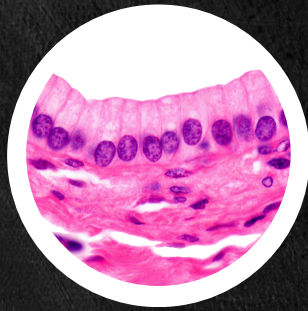


# Oral Histology



Dr. AHMED ELSHOURBAGY



## Choose the correct :

### 1-Concrescence is:

- a- An extra root or accessory roots in a formed tooth.
- b- Distorted root or roots in a formed tooth.
- c- A union of root structure of two or more teeth through cementum only.
- d- A spherical projection on the cemental root surface.

### 2- What structure is formed in the crown first?

- a- Enamel.
- b- Cementum.
- c- Pulp.
- d- Dentine.

### 3- Which of the following induces the dental papilla cells to be differentiated into odontoblasts?

- a- Stratum intermedium.
- b- Reduced enamel epithelium.
- c- Inner enamel epithelium.
- d- Outer enamel epithelium.

### 4- No basal lamina is found between the cells of the:

- a- Stratum intermedium and inner enamel epithelium.
- b- Outer enamel epithelium and the dental sac.
- c- Inner layer of Hertwig's sheath and the dental papilla.
- d- Inner enamel epithelium and the dental papilla.

### 5- Odontoblast

- b- Secretion of enamel matrix.
- c- Maturation of enamel.
- d- Formation of cementum.





6- Which of the following is not derived from the dental organ:

- a- Stellate reticulum.
- b- Hertwig's epithelial root sheath.
- c- Odontoblasts.
- d- Ameloblasts.

7- The stratum intermedium:

- a- Induces dentin formation.
- b- Is separated from the stellate reticulum by a basal lamina.
- c- Develops in cap stage.
- d- Is important for enamel maturation.

8- The dental organ

- a- Develops from cells in the dental follicle.
- b- Is a completely connective tissue structure.
- c- Is a completely epithelial structure.
- d- Is highly vascular, as ameloblasts require an enriched environment.

9- The enamel cord

- a- Is an extension of the dental lamina.
- b- Is an extension of the outer dental epithelium.
- c- Is an extension of successional dental lamina
- d- Extends from the stratum intermedium to the stellate reticulum.





### 10- Dental follicle cells

- a- Differentiate into the ameloblast layer.
- b- Differentiate into the odontoblast layer.
- c- Are found within the dental organ.
- d- Migrate to dentin surface of the root and differentiate into the cementoblast.

### 11- All of the following is the functions of The Stellate Reticulum except:

- a- Keep Space for The enamel development.
- b- Act as a reservoir for nutritive materials.
- c- Act as a cushioned to protect ameloblasts.
- d- Secretes alkaline phosphatase enzyme.

### 12- The epithelial root sheath of Hertwig disintegrates

- a- After odontoblastic differentiation & before dentin matrix formation.
- b- After odontoblastic differentiation & dentin matrix deposition.
- c- Before odontoblastic differentiation.
- d- After cementum formation.

### 13- All of the following is a function of dental sac except:

- a- Nutrition of enamel organ.
- b- Formation of cementum.
- c- Formation of periodontal ligament.
- d- Formation of supporting alveolar bone.





14- The lateral dental lamina gives rise to:

- a- Deciduous teeth .
- b- Permanent successors.
- c- Permanent molars.
- d- Vestibular lamina.

15- The stratum intermedium:

- a- Lies between outer enamel epithelium & stellate reticulum.
- b- Is a transient structure.
- c- Is rich in mucopolysaccharides.
- d- Plays important role in enamel calcification.

16- The down growth of an epithelial thickening buccal to the dental lamina is known as:

- a- Vestibular lamina.
- b- Linguo-alveolar Sulcus.
- c- Lateral dental lamina.
- d- Successional dental lamina.

17- The dental lamina is induced to proliferate into a tooth bud by the:

- a- Basement membrane.
- b- Nerve endings.
- c- Ecto-mesenchyme.
- d- Oral epithelium.

18- Calcified tissues of the tooth are derived from:

- a- Ectoderm only.
- b- Endoderm only.
- c- Mesoderm only.
- d- Ectoderm & Mesoderm.





19- A layer of cells that seems to be essential to enamel formation but does not actually secrete the enamel is:

- a- Outer dental epithelium.
- b- Stratum intermedium.
- c- Reduced dental epithelium.
- d- Vestibular lamina.

20- The stimulus that initiates the actual formation of enamel matrix seems to be:

- a- Reduction of stellate reticulum.
- b- Influence of increased vascularization of the dental sac.
- c- Disappearance of the cell free zone of dental papilla.
- d- Presence of pre-dentin.

21- The number of roots that are formed is determined by the:

- a- Number of root sheaths developed by the enamel organ.
- b- Number of medial ingrowths at the epithelial diaphragm.
- c- Number of root sheaths developed by the dental sac.
- d- Thickness of the cervical loop.

22- Which of the following is the first process to occur in the sequence of tooth development:

- a- Deposition of the first layer of enamel.
- b- Deposition of the first layer of dentin.
- c- Elongation of the inner dental epithelial cells.
- d- Differentiation of odontoblasts.





23- All of the following are involved in the formation of a tooth except:

- a- Epithelial root sheath.
- b- Successional lamina.
- c- Dental lamina.
- d- Vestibular lamina.

24- The dental lamina initiating the permanent molars develops:

- a- As successional lamina.
- b- As a distal extension of the dental lamina.
- c- As lateral dental lamina.
- d- As vestibular lamina.

25- The cell rests of Malassez are derivatives of:

- a- Cervical ameloblasts.
- b- Outer enamel epithelium.
- c- Dental papilla.
- d- Root sheath.

26- Odontogenesis of the primary dentition begins between:

- a- The sixth & seventh week.
- b- The fifth & sixth week.
- c- The seventh & eighth week.
- d- The fourth & fifth week.

27- The embryo's stomodeum is lined by:

- a- Ectoderm.
- b- Endoderm.
- c- Mesoderm.
- d- Ectomesenchyme.





28- By the 6th week of tooth development, the oral epithelium is:

- a- 2-3 layers thickness.
- b- 3-4 layers thickness.
- c- 4-5 layers thickness.
- d- 2-5 layers thickness.

29- The vestibular lamina gives rise to:

- a- The alveolodental sulcus.
- b- The alveolobuccal sulcus.
- c- The alveololingual sulcus.
- d- The alveologingival sulcus.

30- The ectomesenchymal cell condensation just beneath the enamel organ is called:

- a- Dental sac.
- b- Dental follicle.
- c- pulp.
- d- Dental papilla.

31- The cells of the tooth bud have:

- a- High RNA content only.
- b- Low glycogen content only.
- c- Increased oxidative enzyme activity only.
- d- All of the above.





32- Regulatory genes play a significant role in tooth development, they:

- a- Control the tooth position.
- b- Control the tooth number.
- c- Determine the tooth shape.
- d- a & b.

33- Initiation of dental lamina is induced by:

- a- Neural crest cell.
- b- Endoderm.
- c- Ectoderm.
- d- Mesoderm.

34- Primordium for the permanent dentition appears as an extension of dental lamina into the ectomesenchyme:

- a- Lingual to the developing primary tooth germ.
- b- Labial to the developing primary tooth germ.
- c- Mesial to the developing primary tooth germ.
- d- Distal to the developing primary tooth germ.

35- The region where the inner and outer enamel epithelium meets at the rim of the enamel organ is known as:

- a- Zone of Flexion.
- b- Cervical loop.
- c- Epithelial Diaphragm.
- d- Root Sheath of Hertwing's.





36- Which the followings is not a function of stellate reticulum:

- a- Protection of the underlying dental tissues.
- b- Maintenance of tooth shape.
- c- Support the production of enamel.
- d- Control the position & number of tooth germs.

37- The epithelial pearls are derived from:

- a- Dental lamina.
- b- Dental pulp.
- c- Dental sac.
- d- Dental organ.

38- Odontoblasts start their secretory activity:

- a- Before enamel matrix production.
- b- After enamel matrix production.
- c- During enamel matrix production.
- d- During & after enamel matrix production.

39- Preameloblasts differentiate into ameloblasts:

- a- After the differentiation of odontoblasts.
- b- Before the differentiation of odontoblasts.
- c- During the differentiation of odontoblasts.
- d- During & after the differentiation of odontoblasts.





40- During the early stages of tooth development three transitory structures may be seen, these structures are:

- a- Enamel knot, enamel organ & enamel niche.
- b- Enamel knot, enamel cord & enamel niche.
- c- Enamel knot, enamel organ & enamel epithelium.
- d- Enamel niche, enamel organ & enamel knot.

41- The epithelial rests in the periodontal ligament are derived from:

- a- Dental pulp.
- b- Epithelial root sheath of Hertwing's.
- c- Vestibular lamina.
- d- Dental sac.

42- Appositional stage is confined to:

- a- Cap stage. b- Bud stage.
- c- Bell stage. d- Dental lamina.

43- Concrecence usually occurs with:

- a- Permanent maxillary molars.
- b- Permanent maxillary premolars.
- c- Permanent mandibular premolars.
- d- Permanent mandibular premolars.





44- Supernumerary roots occur mainly with:

- a- Permanent third molars.
- b- Permanent second molars.
- c- Permanent first molars.
- d- Permanent second premolars.

45- Enamel pearls occur in:

- a- Apical third of molars roots.
- b- Furcation area of molars.
- c- Cervical third of molars roots.
- d- Furcation area of premolars.

46- The process of differentiation of mesenchymal cells into

Odontoblasts is called:

- a- Initiation. b- Induction.
- c- Apposition. d- Morphodifferentiation.

47- The epithelial root sheath of Hertwing's is composed of:

- a- Outer enamel epithelium & inner enamel epithelium.
- b- Inner enamel epithelium & stratum intermedium.
- c- Outer enamel epithelium & stellate reticulum.
- d- Stellate reticulum & stratum intermedium





48- Inner dental epithelium:

- a- Consists of a single layer of cuboidal epithelial cells.
- b- Consists of a single layer of columnar epithelial cells.
- c- Consists of a single layer of polyhedral epithelial cells.
- d- Consists of a single layer of polygonal epithelial cells.

49- Determination of the initial position of the first cusp of the tooth during crown pattern formation may be achieved by:

- a- The enamel knot. b- The enamel cord.
- c- Both enamel knot and cord. d- None of the above.

50- Before enamel formation begins:

- a- Enamel knot disappears and enamel cord remains.
- b- Enamel knot remains and enamel cord disappear.
- c- Both knot and cord disappear.
- d- Both knot and cord remain.

51- Concerning the stellate reticulum one of the following statements is wrong:

- a- Occupies the central portion of the dental organ.
- b- Lies between outer and inner dental epithelia.
- c- Synthesizes and secretes glucoseaminoglycans.
- d- Becomes polyhedral in shape.





52- The dental sac is:

- a- The condensation of the ectomesenchymal cells surrounding the dental organ.
- b- The condensation of the ectomesenchymal cells surrounding the dental papilla.
- c- The condensation of the ectomesenchymal cells surrounding the dental organ and dental papilla.
- d- None of the above.

53- The main difference between bell and apposition stage is:

- a- The formation of first layer of E.
- b- The formation of first layer of D.
- c- The formation of first layer of C.
- d- The formation of first layer alveolar bone.

54- Concerning the stratum intermedium one of the following statements is incorrect:

- a- It is composed of 2-3 layers of squamous epithelial cells.
- b- It is differentiated between the inner enamel epithelium and stellate reticulum.
- c- It is connected to each other and to the cells of stratum intermedium by desmosomes.
- d- It is essential for enamel formation as it contains acid phosphatase enzyme.

55- Which one of the following functions of the inner dental epithelium is wrong?

- a- It exerts an organizing influence on the undifferentiated cells of the dental papilla to differentiate into ameloblasts.
- b- It shares in the transport of the nutritive materials.
- c- It determines the future incisal or occlusal crown pattern.
- d- It lays down enamel matrix and helps in its mineralization.





56- The epithelial root sheath of Hertwig can't be seen as a continuous layer in the developing root because:

- a- The rapid epithelial sheath proliferation.
- b- The dentin formation.
- c- The rapid epithelial sheath destruction after dentin formation.
- d- All of the above.

57- Epithelial rests of Malassez are:

- a- Epithelial strands and may undergo degeneration only.
- b- Epithelial remnants of the epithelial root sheath of Hertwig only.
- c- Network or isolated islands in the P.L. only,
- d- All of the above.

58- If Hertwig's epithelial root sheath does not disintegrate:

- a- No cementum will be formed on the radicular dentin.
- b- It is likely that some of the enamel will be resorbed.
- c- The apical end of the junctional epithelium will lie occlusal to the cemento-enamel junction.
- d- Predentine will form on the outer surface of the radicular dentin.

59- The reduced enamel epithelium is derived from:

- a- Maturative ameloblasts and stratum intermedium.
- b- Stratum intermedium, stellate reticulum and outer dental epithelium.
- c- Stratum intermedium, stellate reticulum and inner epithelium.
- d- Protective ameloblasts, stratum intermedium, stellate reticulum and outer epithelium.





60- Which of the following is not component of the enamel organ?

- a- Ameloblasts.
- b- Odontoblasts.
- c- Outer enamel epithelium.
- d- Stratum intermedium.

61- Which of the following indicates the major components of a tooth germ?

- a- The dental lamina, the stellate reticulum and the stratum intermedium.
- b- The dental organ, the dental papilla and the dental sac.
- c- The dental pulp, the dental sac and the dental lamina.
- d- The cervical loop, Hertwig's sheath and the inner enamel epithelium.

62- Which of the following is not ectodermal in origin?

- a- Epithelial rests of Malassez.
- b- Anterior pituitary gland.
- c- Stellate reticulum.
- d- Enamel spindles.

63- Which of the following appear **FIRST** in a developing tooth?

- a- Predentin.
- b- Cementoid.
- c- Tome's process.
- d- Secondary dentin.





64- The last hard dental tissue to be deposited is:

- a- Enamel.
- b- Outer layers of cementum.
- c- Mantle dentin.
- d- Primary dentin.

65- Which of the following is associated with an erupted tooth?

- a- Outer Enamel epithelium.
- b- Cervical loop.
- c- Epithelial rests of Malassez.
- d- Stratum intermedium.

66- Which of the following is not true of Hertwig's epithelial root sheath?

- a- It lacks a stellate reticulum.
- b- It is derived from stomodeal ectoderm.
- c- Its remnants form epithelial rests.
- d- It remains intact until a layer of cementum has been formed.

67- Which of the following contain blood vessels?

- a- Cartilage.
- b- Enamel.
- c- Dental lamina.
- d- Dental sac





*68- Which group of structures is entirely derived from the dental sac?*

- a- Dentin, pulp, cementum.*
- b- Cementum, alveolar bone, pulp.*
- c- Cementum, enamel, pulp.*
- d- Periodontal ligament, cementum, alveolar bone.*

*69-The development of the root begins when*

- a- The inner and outer dental epithelium reaching the future C.E.J.*
- b- The crown is completely formed.*
- c- The development of the supporting bone begins.*
- d- The development of the periodontal ligament begins.*

*70- The function of the inner dental epithelium is.....*

- a- Exerts organization influence on the dental papilla cells.*
- b- Lays down dentin matrix*
- c- Protects the enamel after eruption.*
- d- Provides the enamel organs with alkaline phosphatase*

*71-The tooth germ is composed of*

- a- Dental papilla, dental follicle, dental organ.*
- b- Dental follicle, dental lamina, vestibular lamina.*
- c- Dental papilla, dental lamina, dental organ.*
- d- Dental organ, dental follicle, dental lamina.*





72- The apposition stage of tooth development begins

- a- When the root of the tooth begins to develop.
- b- When the first layer of dentine is deposited.
- c- When odontoblast start to differentiate.
- d- When the first layer of enamel lay down.

73- What statement about epithelial diaphragm is Not true?

- a- It produces narrowing of the wide cervical opening.
- b- Its proliferation is accompanied by proliferation of pulp cells adjacent to diaphragm.
- c- It's growing end is located coronal to the root sheath.
- d- It grows in a horizontal plane.

74- The cells of the stratum intermedium:

- a- Have a stellate outline.
- b- Are not yet differentiated in the bell stage.
- c- Are in direct contact with the outer dental epithelium.
- d- Are characterized by high alkaline phosphatase enzyme activity.

75- The dental follicle:

- a- Is an epithelial structure.
- b- Give rise to the radicular pulp.
- c- Is not present in permanent teeth.
- d- give rise to cementum.





76-If the process of morphogenesis is disturbed:

- a- Changes will occur in the shape of crown and root.
- b- Enamel formation will be abnormal.
- c- Dentin formation will be abnormal.
- d- Absence of cementum.

77- The mesenchymal cells lying adjacent to the inner enamel epithelium:

- a- Differentiate into ameloblasts.
- b- Differentiate into odontoblasts.
- c- Are under the influence of stellate reticulum
- d- Become markedly folded.

78- The dental lamina:

- a- Breaks at the cap stage.
- b- Has no branching.
- c- Has no remnants.
- d- Develops from the oral epithelium.

79- Advanced bell stage of tooth development refers to:

- a- Histodifferentiation , morphodifferentiation.
- b- Initiation & Proliferation.
- c- Mesenchymal condensation.
- d- Apposition of dental tissues.

80- The epithelial component of the tooth germ is known as:

- a- Dental lamina.
- b- Dental papilla.
- c- Enamel organ.
- d- Dental follicle.





81- Which of the following is not part of the tooth germ?

- a- Dental papilla.
- b- Dental follicle.
- c- Dental lamina.
- d- Enamel organ.

82- The dental sac plays an important role in the formation of all of the following except:

- a- Periodontal ligament.
- b- Dentin of the root.
- c- Alveolar bone proper.
- d- Cementum.

83- After the crown of the tooth is formed, the dental papilla is called:

- a- Dental pulp.
- b- Pulp stone.
- c- Dental sac.
- d- Dentin.

84- In a developing tooth, if Hertwig's sheath and the epithelial diaphragm were failed to form, the resulting tooth would exhibit:

- a- No radicular dentin.
- b- Malformed or fused roots.
- c- Acellular, but no cellular, cementum.
- d- Defective enamel in the cervical region.





85- The reduced enamel epithelium:

- a- Lacks cells derived from the stellate reticulum.
- b- Contains protective ameloblasts.
- c- Overlies immature enamel which has not yet reached its full thickness.
- d- Does not cover enamel located at the cervical end of the crown.

86- Which of the following is a component of tooth germ?

- a- Lateral dental lamina.
- b- Successional lamina.
- c- Vestibular lamina.
- d- Dental sac.

87- The origin of enamel is:

- a- Endoderm.
- b- Mesoderm.
- c- Ectoderm.
- d- Ectomesenchyme.

88- Which statement about early dental development is incorrect?

- a- Cap stage is accomplished by unequal growth in different parts.
- b- In the cap stage the inner and outer enamel epithelial cells are completely alike.
- c- The transition from cap stage to bell stage is particularly marked by the full differentiation of stellate reticulum.
- d- The dental papilla and the dental sac develop in the cap stage.

89- The dental sac gives rise to:

- a- Cementoblasts and periodontal ligament.
- b- Periodontal ligament and dental pulp.
- c- Dental pulp and attachment epithelium.
- d- Odontoblasts and Cementoblasts.

