

BDS FIRST PROFESSIONAL EXAMINATION 2007
ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

Total Marks: 45
Total No. of MCQs: 45

Time Allowed: 45 Minutes

- MCQ.1** **Disturbance of saliva production from the parotid gland is likely to result from damage to which of the following ganglia?**
- a) Gasserian
 - b) Geniculate
 - c) Otic
 - d) Pterygopalatine
 - e) Trigeminal
- Key: c**
Topic: Oral Anatomy
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- MCQ.2** **A 20 year old man falls down and chips the incisal edge of his maxillary central incisor, reducing the length of the crown. A dentist informs him that the tooth may erupt a little to compensate for the loss. This tooth movement is likely to result in increase in size of which of the following dental tissues?**
- a) Cementum
 - b) Dentin
 - c) Enamel
 - d) Periodontal ligament
 - e) Pulp
- Key: a**
Topic: Oral Anatomy
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- MCQ.3** **A patient complains of loss of taste, and a numb sensation in the left half of his tongue, after removal of his left lower wisdom tooth. Which of the following nerves is most likely to have been injured during removal of this tooth?**
- a) Facial nerve
 - b) Glossopharyngeal nerve
 - c) Inferior alveolar nerve
 - d) Lingual nerve
 - e) Mandibular nerve
- Key: d**
Topic: Oral Anatomy

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- MCQ.4** **The position of maximum inter cuspatation of upper & lower teeth is referred to as**
- a) Centric position
 - b) Centric occlusion
 - c) Centric relation
 - d) Centric organization
 - e) Centric bite
- Key:** b
Topic: Oral Anatomy
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- MCQ.5** **A person eats a starch rich diet. Saliva from which of the following glands is most likely to be effective in digestion of this food?**
- a) Glamds of von Ebner
 - b) Minor Salivary Glands
 - c) Parotid glands
 - d) Submandibular glands
 - e) Sublingual glands
- Key:** c
Topic: Oral Anatomy
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- MCQ.6** **At the age of nine years, the mandibular permanent first molar has its distal contact with which of the following teeth?**
- a) First premolar
 - b) No distal contact
 - c) Second deciduous molar
 - d) Second permanent molar
 - e) Second premolar
- Key:** b
Topic: Oral Anatomy
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- MCQ.7** **A deep carious lesion in a tooth reaches the pulp. The pulp responds by vasodilatation. There is migration of white blood cells into the pulp. This response is most likely to be initiated by cells in which of the following zones of the pulp?**
- a) Cell free zone
 - b) Cell rich zone
 - c) Odontoblast layer
 - d) Plexus of Raschow
 - e) Pulp core
- Key:** e
Topic: Oral Histology

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- MCQ.8** **A 13 year old boy presents to his general dental practitioner with a broken upper incisor tooth of one day duration. He complains of pain in the tooth when drinking cold water. On examination the enamel of the incisal edge has been chipped off, and the underlying dentin exposed. Which of the following contents of the dentinal tubule are most likely to be responsible for the pain felt by the patient?**
- a) Collagen
 - b) Fluid
 - c) Nerve endings
 - d) Odontoblastic process
 - e) Proteoglycans
- Key:** b
Topic: Oral Histology
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- MCQ.9** **Which of the following types of dentin is continuously produced throughout life?**
- a) Interglobular dentin
 - b) Intertubular dentin
 - c) Intratubular dentin
 - d) Mantle dentin
 - e) Tertiary dentin
- Key:** c
Topic: Oral Histology
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- MCQ.10** **Which of the following ducts arise from secretory end pieces of salivary glands?**
- a) Striated ducts
 - b) Excretory ducts
 - c) Intercalated ducts
 - d) Interlobular ducts
 - e) Secretory
- Key:** c
Topic: Oral Histology

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- MCQ.11** In a haematoxylin and eosin stained histological section of a salivary gland, the following features are seen: Lightly stained pyramidal cells with flattened nuclei, arranged in tubular patterns. Which of the following cells are likely to have these characteristics?
- a) Ductal cells
 - b) Fibroblasts
 - c) Mucous cells
 - d) Myoepithelial cells
 - e) Serous cells
- Key:** c
Topic: Oral Histology
- MCQ.12** The part of alveolar bone that surrounds the root of the tooth and gives attachment to the principal fibres of the periodontal ligament is called:
- a) Alveolar crest
 - b) Alveolar process
 - c) Bundle bone
 - d) Inner cortical plate
 - e) Outer cortical plate
- Key:** c
Topic: Oral Histology
- MCQ.13** When enamel surface is viewed under the microscope, shallow furrows called perikymata are seen. These are likely to be due to
- a) Abrasion from tooth brush
 - b) Attrition from occlusal forces
 - c) Cracks (lamellae) in enamel
 - d) Incremental formation of enamel
 - e) Organic (protein) deposits from the saliva
- Key:** d
Topic: Oral Histology
- MCQ.14** Which of the following terms may be used to indicate the dentin formed *first* in the tooth?
- a) Granular Dentin
 - b) Hyaline Dentin
 - c) Mantle Dentin
 - d) Primary Dentin
 - e) Radicular Dentin
- Key:** c
Topic: Oral Histology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

- MCQ.15** Cells that are responsible for the production of reactive dentin are most likely to be present in which of the following areas of pulp?
a) Around blood vessels
b) Cell free zone
c) Cell rich zone
d) Pulp core
e) Pulp periphery
Key: e
Topic: Oral Histology
- MCQ.16** Merkel cells are likely to be found in which of the following tissues?
a) Epithelium
b) Papillary lamina propria
c) Periosteum
d) Reticular lamina propria
e) Submucosa
Key: a
Topic: Oral Histology
- MCQ.17** Which of the following papillae of the tongue are dome shaped, with taste buds on the superior surface, and are present scattered on the anterior 2/3rd of the tongue?
a) Circumvallate papillae
b) Filiform papillae
c) Foliate papillae
d) Fungiform papillae
e) Lingual papillae
Key: a
Topic: Oral Histology
- MCQ.18** Which of the following areas of enamel is strongest i.e. most resistant to stresses?
a) Perikymata
b) Enamel tufts
c) Gnarled enamel
d) Hunter Schregger bands
e) Striae of Retzius
Key: c
Topic: Oral Histology

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MCQ.19 Ameloblasts form conical projections called Tomes Processes during which of the following stages of amelogenesis?

- a) Desmolytic
- b) Maturative
- c) Morphogenic
- d) Protective
- e) Secretory

Key: e

Topic: Oral Histology

MCQ.20 A child suffers from a febrile illness. During the illness tooth development temporarily slows down. The development resumes normally soon after. This change in development of the tooth structure is most likely to be apparent in which of the following histological features of dentin?

- a) Dentinal tubules
- b) Granular layer of Tome's
- c) Lines of von Ebner
- d) Secondary dentin
- e) Tertiary dentin

Key: c

Topic: Oral Histology

MCQ.21 Dentin formation is most likely to be initiated by which of the following parts of the enamel organ?

- a) Inner enamel epithelium
- b) Outer enamel epithelium
- c) Reduced enamel epithelium
- d) Stellate reticulum
- e) Stratum intermedium

Key: a

Topic: Oral Histology

MCQ.22 Which of the following types of dentin is likely to have the highest mineral content?

- a) Interglobular
- b) Inter-tubular
- c) Mantle
- d) Secondary
- e) Sclerotic

Key: e

Topic: Oral Histology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

- MCQ.23** During production of enamel which of the following parts of the enamel organ collapses (disappears)?
- a) Inner enamel epithelium
 - b) Outer enamel epithelium
 - c) Reduced enamel epithelium
 - d) Stellate reticulum
 - e) Stratum intermedium
- Key:** d
Topic: Oral Histology
- MCQ.24** Which of the following groups of periodontal ligament fibres are most numerous?
- a) Alveolar crest
 - b) Apical
 - c) Horizontal
 - d) Interradicular
 - e) Oblique
- Key:** e
Topic: Oral Histology
- MCQ.25** The highest quantity of inorganic content is likely to be present in which of the following tissues related to teeth?
- a) Cementum
 - b) Dentin
 - c) Enamel
 - d) Periodontal ligament
 - e) Pulp
- Key:** c
Topic: Oral Histology
- MCQ.26** Which of the following histological features of enamel is apparent due to an optical phenomenon?
- a) Tufts
 - b) Spindles
 - c) Lines of Retzius
 - d) Hunter Schreger bands
 - e) Cross striations
- Key:** d
Topic: Oral Histology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

- MCQ.27** **Differentiation of ameloblasts from the internal enamel epithelium takes place in which of the following stages of tooth development?**
- a) Bud
 - b) Cap
 - c) Early bell
 - d) Eruption
 - e) Late bell
- Key:** c
Topic: Oral Embryology
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- MCQ.28** **During an illness for a child tooth calcification is disturbed. This will most likely affect teeth that are in which of the following stages of development?**
- a) Bud
 - b) Cap
 - c) Early Bell
 - d) Late Bell
 - e) Morphogenic stage
- Key:** d
Topic: Oral Embryology
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- MCQ.29** **Ossification of the mandible starts in which if the following regions?**
- a) Alveolar process
 - b) Condyle
 - c) Coronoid
 - d) Mental foramen
 - e) Symphysis menti
- Key:** d
Topic: Oral Embryology
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- MCQ.30** **Intrinsic and extrinsic muscles of the tongue are the derivatives of which of the following?**
- a) 1st pharyngeal arch
 - b) 1st, 3rd, and 4th pharyngeal arches
 - c) 2nd pharyngeal arch
 - d) Neural crest cells
 - e) Occipital myotomes
- Key:** e
Topic: Oral Embryology

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- MCQ.31** **The calcium ions present in saliva are most likely to play a role in which of the following functions of saliva?**
- a) Antibacterial
 - b) Buffering
 - c) Digestion
 - d) Lubrication
 - e) Protection
- Key:** e
Topic: Oral Physiology
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- MCQ.32** **A sample of saliva taken from the human oral cavity is found to contain the enzyme lipase. This sample is likely to have been collected from which of the following areas of the oral cavity?**
- a) Cheeks
 - b) Floor of the mouth
 - c) Lips
 - d) Palate
 - e) Tongue
- Key:** e
Topic: Oral Physiology
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- MCQ.33** **During cavity preparation a dentist drills deeply into a tooth and exposes the pulp chamber. The dentist covers the exposed pulp tissue with a calcium hydroxide cement, and reassures the patient. Which of the following cells of the pulp are most likely to be responsible for healing and repair in this area?**
- a) Fibroblast
 - b) Macrophage
 - c) Mast cell
 - d) Odontoblast
 - e) Undifferentiated cell
- Key:** e
Topic: Oral Physiology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

- MCQ.34** **Repeated exposure of the teeth to gastric contents (e.g. due to vomiting) may result in which of the following conditions?**
- a) Abrasion
 - b) Attrition
 - c) Caries
 - d) Erosion
 - e) Periodontal disease
- Key:** d
Topic: Oral Physiology
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- MCQ.35** **Movement only in the menisco-temporal (upper) compartment of temporomandibular joint takes place in which of the following motions of the mandible?**
- a) Closing fully
 - b) Closing slightly
 - c) Opening slightly
 - d) Opening wide
 - e) Protrusion
- Key:** e
Topic: Oral Physiology
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- MCQ.36** **Which of the following is the last succedaneous tooth to erupt?**
- a) Maxillary canine
 - b) Mandibular canine
 - c) Maxillary first premolar
 - d) Mandibular first premolar
 - e) Mandibular third molar
- Key:** a
Topic: Tooth Morphology
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- MCQ.37** **The identifying number of the permanent mandibular left second molar in the FDI numbering system is:**
- a) 2
 - b) 17
 - c) 18
 - d) 37
 - e) 52
- Key:** d
Topic: Tooth Morphology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
MODEL PAPER (MCQs)

- MCQ.38** **The morphology of crown of the tooth is determined at which of the following stages of tooth development?**
- a) Bud stage
 - b) Cap stage
 - c) Early bell stage
 - d) Lamina stage
 - e) Late bell stage
- Key:** c
Topic: Tooth Morphology
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- MCQ.39** **Which of the following is generally the longest root of maxillary permanent 1st molar?**
- a) Distal
 - b) Distobuccal
 - c) Mesial
 - d) Mesiobuccal
 - e) Palatal
- Key:** e
Topic: Tooth Morphology
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- MCQ.40** **Which of the following sequence of eruption of permanent teeth is normally seen in the maxilla?**
- a) 1, 6, 2, 4, 3, 5, 7, 8
 - b) 1, 6, 2, 3, 4, 5, 7, 8
 - c) 6, 1, 2, 4, 3, 5, 7, 8
 - d) 6, 1, 2, 3, 4, 5, 7, 8
 - e) 6, 2, 1, 3, 4, 5, 7, 8
- Key:** c
Topic: Tooth Morphology
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- MCQ.41** **The steepest cusp incline is present in which of the following permanent teeth?**
- a) Maxillary first molar
 - b) Maxillary first premolar
 - c) Mandibular first molar
 - d) Mandibular first premolar
 - e) Mandibular second molar
- Key:** b
Topic: Tooth Morphology

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ORAL BIOLOGY AND TOOTH MORPHOLOGY
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- MCQ.42** Which of the following is the most poorly developed cusp in maxillary second molar?
a) Mesiobuccal
b) Mesiolingual
c) Distobuccal
d) Distolingual
e) Cusp of carabelli
Key: d
Topic: Tooth Morphology
- MCQ.43** A Y shaped occlusal groove is most likely to be present in which of the following teeth?
a) Deciduous premolars
b) Mandibular first premolar
c) Mandibular second premolar
d) Maxillary first premolar
e) Maxillary second premolar
Key: c
Topic: Tooth Morphology
- MCQ.44** The roots of which of the following permanent tooth are normally completely formed by age ten years?
a) Lower canine
b) Lower second molar
c) Lower second premolar
d) Upper canine
e) Upper central incisor
Key: e
Topic: Tooth Morphology
- MCQ.45** The histology of enamel may be best observed using which of the following methods of slide preparation?
a) Decalcified H&E stain
b) Exfoliative cytology
c) Ground section
d) H&E stain
e) PAS stain
Key: c
Topic: Laboratory Assignment