

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I B.D.S Degree Examination – 29 MAR 2021**

Time: Three Hours

Max. Marks: 70 Marks

**HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY,  
PHYSIOLOGY AND HISTOLOGY.**

Your answers should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary

**LONG ESSAYS 2X10=20 Marks**

Q.1 Describe the different notation systems of teeth, discuss the elevations and depression on the tooth surface.

Q.2 Structure of Dentin.

**SHORT ESSAYS 8X5=40 Marks**

Q.3 Seeding theory.

Q.4 Zones of pulp.

Q.5 Principle fibers of periodontal ligament.

Q.6 Non-Keratinocytes.

Q.7 Occlusal aspect of mandibular 1st premolar.

Q.8 Development of tongue.

Q.9 Differentiate between cellular and Acellular cementum.

Q.10 Life cycle of Ameloblasts.

**SHORT ANSWERS 2X5=10 Marks**

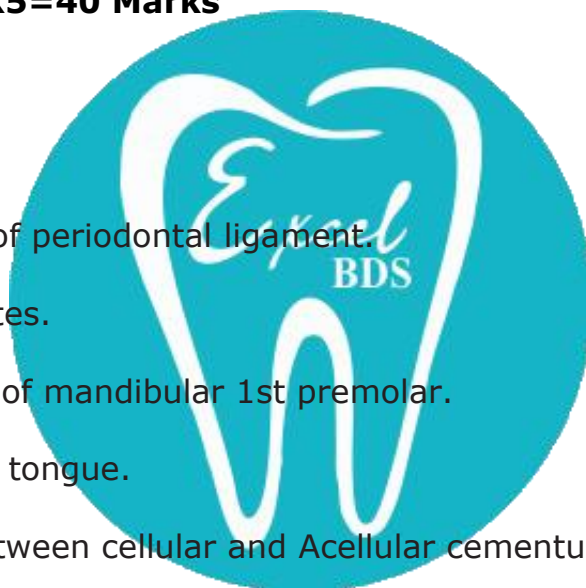
Q.11 Basket cells. (Myoepithelial cells)

Q.12 Submerged teeth.

Q.13 Pulp stones.

Q.14 Define Eruption and Shedding.

Q.15 Line angles.



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I B.D.S Degree Examination – 24 NOV 2020**

Time: Three Hours

Max. Marks: 70 Marks

**HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY,  
PHYSIOLOGY AND HISTOLOGY.**

Your answers should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary

**LONG ESSAY (2 X 10 = 20M)**

Q.1. Classify salivary glands. Write in detail the ductal system.

chronology

Q.2. Describe in detail the morphology of mandibular 1" premolar. Add a note on its

**SHORT ESSAY (8 X 5= 40M)**

Q.3 Dead tracts and sclerotic dentine. Types of dentin in cross section

Q.4. Age changes in Enamel.

Q.5. Principle fibers of periodontal ligament.

Q.6. Theories of mineralization.

Q.7. Functions and histology of maxillary sinus.

Q.8. Histo-physiological stages of tooth development.

Q.9. Development of tongue.

Q.10. Dento-gingival junction.

**SHORT ANSWERS (5X2=10M)**

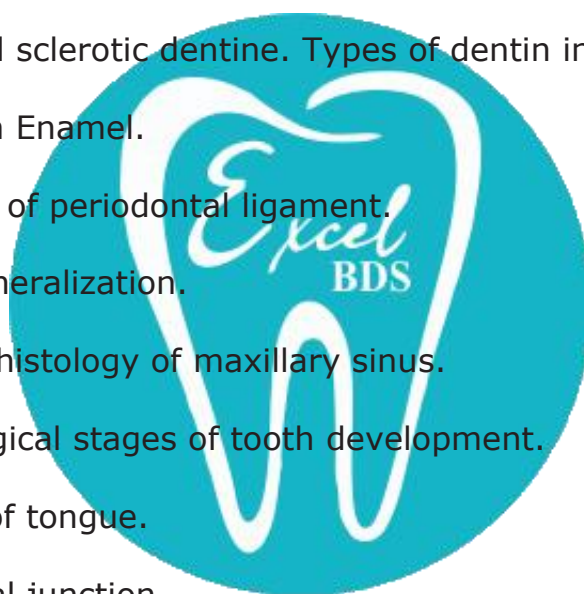
Q.11. Non-Keratinocytes.

Q.12. Hyaline layer of Hopewell Smith.

Q.13. Enamel spindle.

Q.14. Meckel's cartilage.

Q.15. Cingulum.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June 2019

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

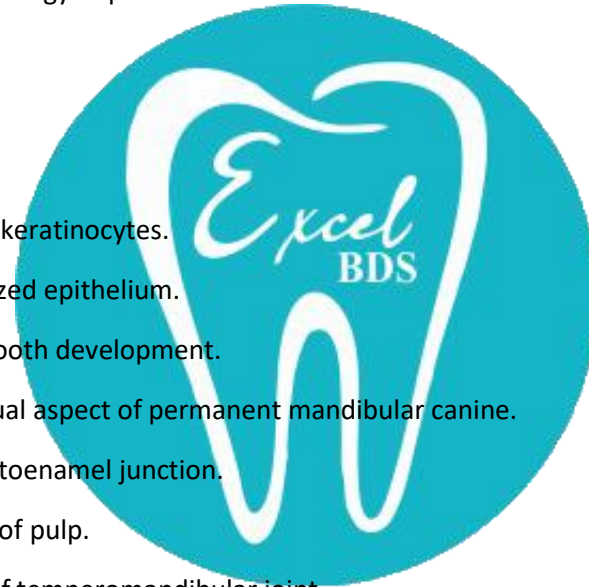
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

1. Describe the fibers of periodontal ligament and write about the synthetic and resorptive cells of periodontal ligament.
2. Describe in detail morphology of permanent mandibular first molar.

### **\*SHORT ESSAY\***

- Write in brief about non keratinocytes.
- Discuss layers in keratinized epithelium.
- Transient structures of tooth development.
- Write in brief about lingual aspect of permanent mandibular canine.
- Describe types of cements/enamel junction.
- Discuss the age changes of pulp.
- Write in brief histology of temporomandibular joint.
- Discuss theories of dentin hypersensitivity.



### **\*SHORT ANSWERS\***

- Write in brief about Resting and Reversal lines.
- Enumerate the functions of maxillary sinus.
- Draw well labelled diagram of enamel lamellae and tufts.
- Write in brief about Curve of spee.
- Define Cingulum and fossa.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2018

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

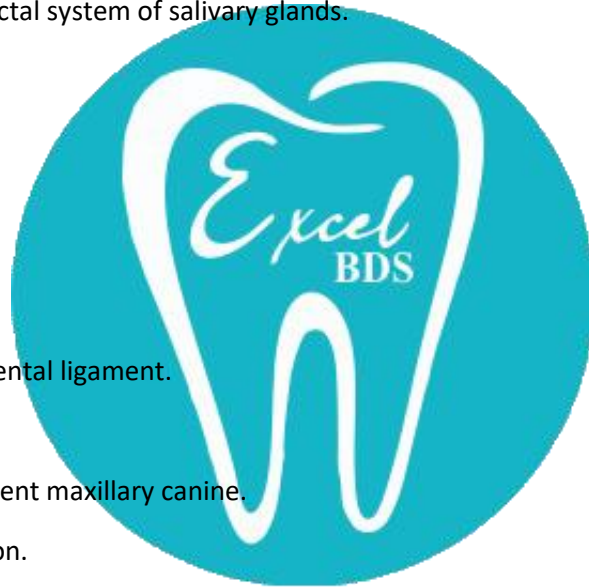
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Describe in detail the morphology of Mandibular first premolar.
- Classify salivary glands.
- Describe in detail the ductal system of salivary glands.

### **\*SHORT ESSAY\***

- Odontoblast.
- Intercellular junctions.
- Pulp stones.
- Principal fibers of periodontal ligament.
- Enamel lamellae.
- Lingual aspect of permanent maxillary canine.
- Systems of dental notation.
- Oral phase of deglutition.



### **\*SHORT ANSWERS\***

- Incremental lines.
- Taste buds.
- Ridge.
- Seeding theory.
- Stellate reticulum.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – July 2018

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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**\*LONG ESSAY\***

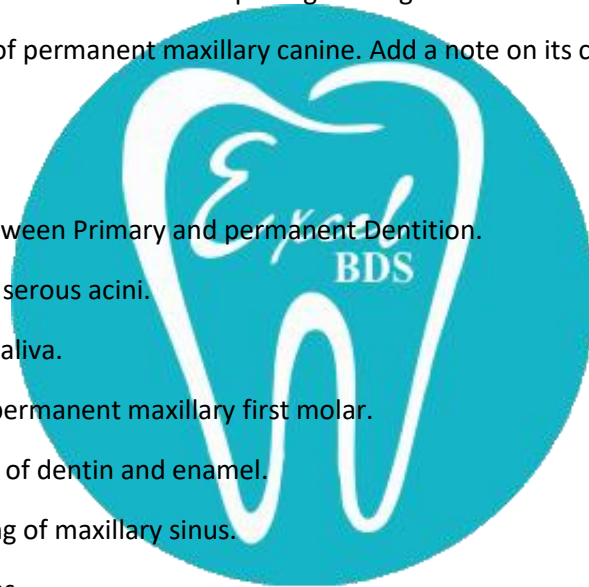
- Enumerate and write in detail about the morphological stages in tooth development.
- Discuss the morphology of permanent maxillary canine. Add a note on its chronology.

**\*SHORT ESSAY\***

- Write the differences between Primary and permanent Dentition.
- Describe the histology of serous acini.
- Discuss the functions of saliva.
- Occlusal morphology of permanent maxillary first molar.
- Discuss incremental lines of dentin and enamel.
- Discuss function and lining of maxillary sinus.
- Tooth Numbering Systems.
- Principal fibres of periodontal ligament.

**\*SHORT ANSWERS\***

- Pulp stone.
- Define cusp, fossa.
- Functions of reduced enamel epithelium.
- Cemento Enamel junction.
- Tomes granular layer.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2017

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

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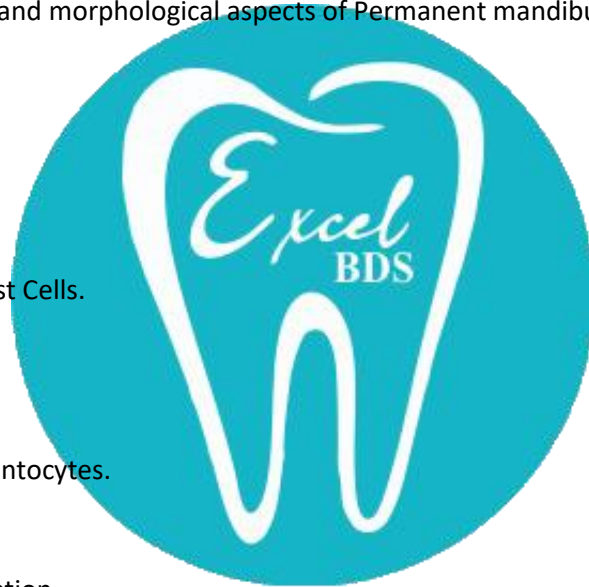
Draw neat labeled diagrams wherever necessary.

**\*LONG ESSAYS\***

- Describe the development of Dentogingival Junction. Add a note on Junctional Epithelium.
- Describe the chronology and morphological aspects of Permanent mandibular second premolar. Add a note on Arch Traits.

**\*SHORT ESSAYS\***

- Derivatives of Neural crest Cells.
- Calcifications.
- Cap stage.
- Cementoblasts and cementocytes.
- Histology of Bone.
- Mechanism of tooth Eruption.
- Gingival Fibers.
- Functions of periodontal ligament.



**\*SHORT ANSWERS\***

- Cingulum.
- Derivatives of dental papilla and dental sac.
- Embrasures.
- Incremental lines of Dentin.
- Mamelons.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Aug 2017

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

**\*LONG ESSAY\***

- Classify oral mucous membrane and write in detail about histology of masticatory mucosa.
- Discuss the morphology of permanent mandibular first molar. Add a note on its chronology.

**\*SHORT ESSAY\***

- Histology of gingiva.
- Describe the histology of mixed salivary gland.
- Discuss the functions of periodontal ligament.
- Crown morphology of permanent maxillary canine.
- Discuss age changes in dentin, enamel and pulp.
- Theories of tooth eruption.
- Tooth Numbering systems.
- Deglutition.

**\*SHORT ANSWERS\***

- Shedding of teeth.
- Fate of dental lamina.
- Hertwigs epithelial root sheath.
- Cementoenamel junction.
- Interglobular dentin.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2016

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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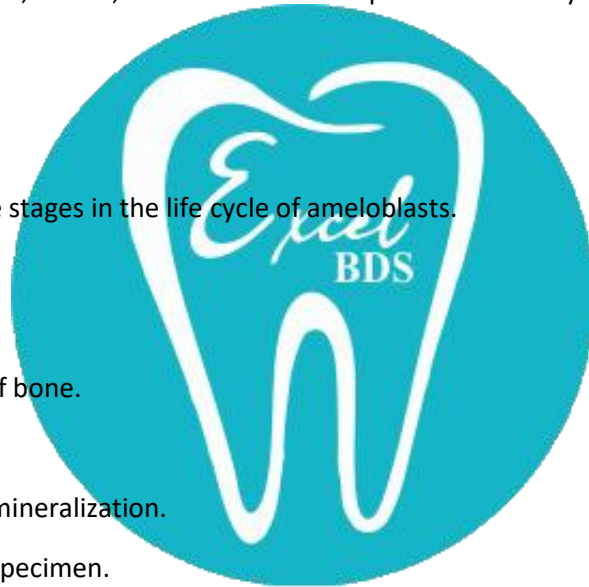
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Enumerate the zones of dental pulp. Describe the histology of dental pulp. Add a note on the blood vessels of the pulp.
- Describe the buccal, palatal, mesial, distal and occlusal aspects of maxillary first premolar. Add a note on its chronology.

### **\*SHORT ESSAY\***

- Organizing and formative stages in the life cycle of ameloblasts.
- Interglobular dentin.
- Types of cementum.
- Internal reconstruction of bone.
- Myoepithelial cells.
- Matrix vesicle theory of mineralization.
- Decalcification of tissue specimen.
- Development of face.



### **\*SHORT ANSWERS\***

- Perikymata.
- Dead tracts
- Submerged tooth.
- Compensatory curves of dental arch.
- Dental formula.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June 2016

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Enumerate the stages in the life cycle of ameloblasts. Describe in detail the events in amelogenesis.
- Describe the buccal, palatal and Occlusal surface of permanent maxillary first molar. List five important differences from permanent maxillary second molar.

### **\*SHORT ESSAY\***

- Early bell stage of tooth development.
- Structure of dentinal tubules.
- Cells of dental pulp.
- Alveolar bone proper.
- Vermilion border of lip.
- Theories of mineralization.
- Fixation of tissue specimen.
- Development of tongue.

### **\*SHORT ANSWERS\***

- Age changes in dentin.
- Incremental lines of Salter.
- Epithelial attachment.
- Mast cells.
- Transverse ridge.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2015

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

**\*LONG ESSAYS\***

- Describe in detail the morphology of the mandibular first molar. Add a note on its Chronology.
- Enumerate the stages in the lifecycle of ameloblast. Describe in detail the events in amelogenesis.

**\*SHORT ESSAYS\***

- Microscopic appearance of Gingiva.
- Myoepithelial Cells.
- Principal fibres of periodontal Ligament.
- Root formation.
- Tooth numbering systems.
- Oral phase of Deglutition
- Osteoclast.
- Theories of dentin Sensitivity.



**\*SHORT ANSWERS\***

- Cellular Cementum.
- Dead tracts.
- Lining of Maxillary Sinus.
- Oblique Ridge.
- Zone of Weil.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – July 2015

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAYS\***

- Describe in detail the morphology of the Maxillary first premolar. Add a note on its chronology.
- Describe the Light and Ultra microscopic appearance of Gingiva.

### **\*SHORT ESSAYS\***

- Cementoenamel junctions.
- Hypocalcified areas of Enamel.
- Functions of Pulp.
- Booster theory of Mineralization.
- Ducts of Salivary Glands.
- Occlusal surface of permanent maxillary first Molar.
- Primary Dentin.
- Taste buds.



### **\*SHORT ANSWERS\***

- Bundle Bone.
- Fibroblasts.
- Functions of Maxillary Sinus.
- Mamelons.
- Maturative stage in Life cycle of Ameloblast.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2014

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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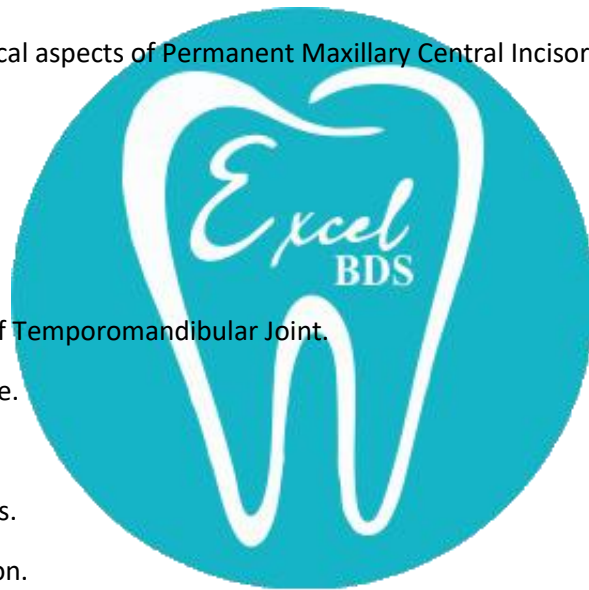
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAYS\***

- Describe in detail the Ductoacinar unit of Salivary Glands and add a note on composition and functions of saliva.
- Describe the morphological aspects of Permanent Maxillary Central Incisor. Add a note on the types of Traits.

### **\*SHORT ESSAYS\***

- Lining Mucosa.
- Anatomy and histology of Temporomandibular Joint.
- Dental Lamina and its fate.
- Types of Bone.
- Tooth numbering systems.
- Theories of Tooth eruption.
- Cementogenesis.
- Pain.



### **\*SHORT ANSWERS\***

- Overjet and Overbite.
  - Glands of Blandin and Nuhn
- Birbeck's Granules.
- Lamina Dura.
  - Enamel Knot, cord and Niche.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June 2014

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

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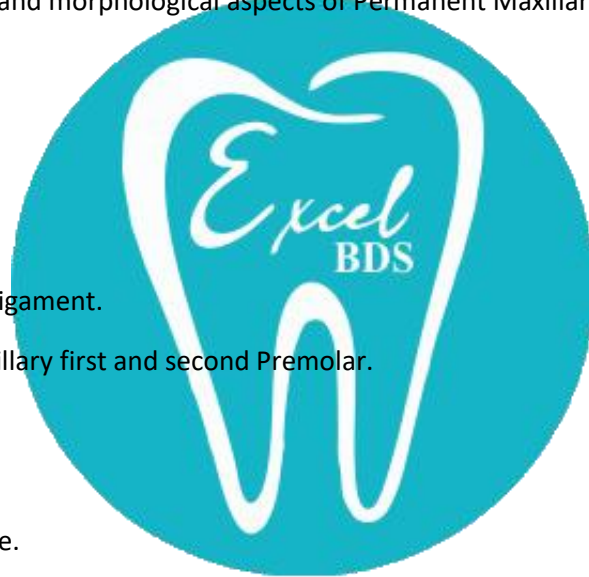
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAYS\***

- Describe in detail the mechanism of Tooth Eruption.
- Describe the chronology and morphological aspects of Permanent Maxillary second premolar.

### **\*SHORT ESSAYS\***

- Root formation.
- Cells of the Periodontal Ligament.
- Difference between Maxillary first and second Premolar.
- Histology of Shedding.
- Mastication.
- Development of Mandible.
- Specialized Mucosa.
- Histology of Salivary Glands.



### **\*SHORT ANSWERS\***

- Line Angles and Point Angles.
- Morula.
- Freeway Space.
- Incremental lines of Retzius.
- Interglobular Dentin.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2013

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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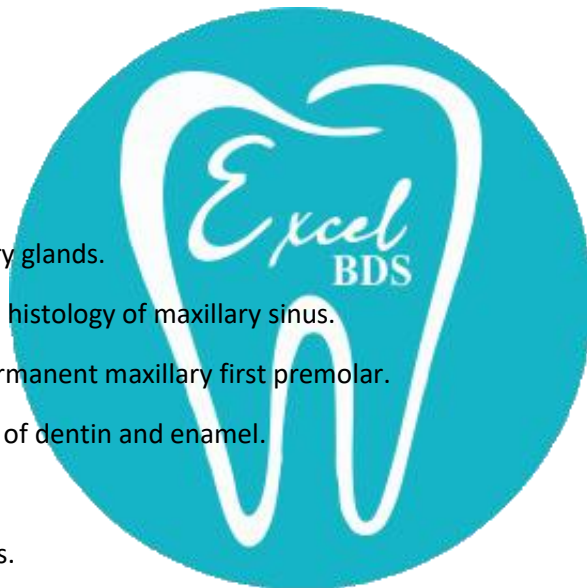
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Enumerate the stages in tooth development.Discuss in detail about amelogenesis.
- Describe the morphology of permanent maxillary first molar.Add a note on its chronology.

### **\*SHORT ESSAY\***

- Specialized oral mucosa.
- Histology of minor salivary glands.
- Discuss the functions and histology of maxillary sinus.
- Crown morphology of permanent maxillary first premolar.
- Discuss incremental lines of dentin and enamel.
- Shedding of teeth.
- Tooth numbering systems.
- Principal fibres of periodontal ligament.



### **\*SHORT ANSWERS\***

- Pulp stone.
- Define cingulum,ridge and fossa.
- Enamel lamellae.
- Interglobular dentin.
- Non keratinocytes.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June 2013

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

**\*LONG ESSAY\***

- Describe in detail the morphology of permanent Mandibular first molar.
- Describe in detail the hypocalcified structures in Enamel.

**\*SHORT ESSAY\***

- Cellular cementum.
- Vermilion zone of lip.
- Myoepithelial cell.
- Age changes in dentin.
- Periodontal ligament traction theory.
- Differences between the permanent maxillary and mandibular canine.
- Occlusal surface of maxillary first premolar.
- Masseter.



**\*SHORT ANSWERS\***

- Fixation.
- Lamina dura.
- Medial pterygoid.
- Dental papilla.
- Meckel's cartilage.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June 2012

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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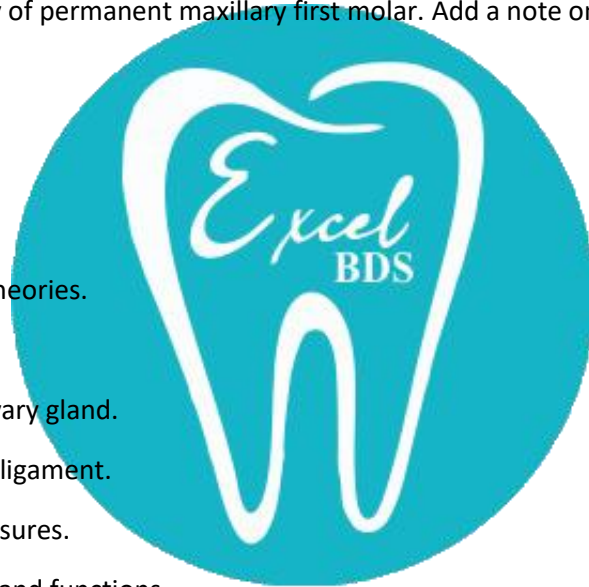
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Explain in detail the life cycle of Ameloblasts with suitable Diagrams.
- Describe the morphology of permanent maxillary first molar. Add a note on chronology of maxillary permanent first molar.

### **\*SHORT ESSAY\***

- Mandibular nerve.
- Dentin hypersensitivity theories.
- Keratinized mucosa.
- Histology of mucous salivary gland.
- Functions of periodontal ligament.
- Contact areas and embrasures.
- Maxillary sinus histology and functions.
- Development of palate.



### **\*SHORT ANSWERS\***

- Osteoblast.
- Cellular cementum.
- Age changes in enamel.
- Hertwigs epithelial root sheath.
- Define: Ridge, Fossa.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2012

Time: 3 Hrs.

[Max.Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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Draw neat labeled diagrams wherever necessary.

**\*LONG ESSAY\***

- Classify salivary glands and ducts. Explain histology of serous salivary gland.
- Explain the morphology of Mandibular second premolar with suitable diagrams.

**\*SHORT ESSAY\***

- Incremental lines of Enamel, Dentin, Cementum, Bone.
- Papillae of tongue.
- Ameloblasts in formative stage.
- Principal fibers of periodontal ligament.
- Cemento enamel junction.
- Alveolar bone proper.
- Age changes in pulp.
- Theories of tooth eruption.

**\*SHORT ANSWERS\***

- Odontoclast.
- Interglobular dentin.
- Functions of maxillary sinus.
- Name any four nonkeratinocytes.
- Predentin.



# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June /July 2011

Time: 3 Hrs.

[Max Marks: 70]

## **HUMAN ORAL AND DENTAL ANATOMY, EMBRYOLOGY, PHYSIOLOGY & HISTOLOGY (RS-3)**

QP Code: 1181

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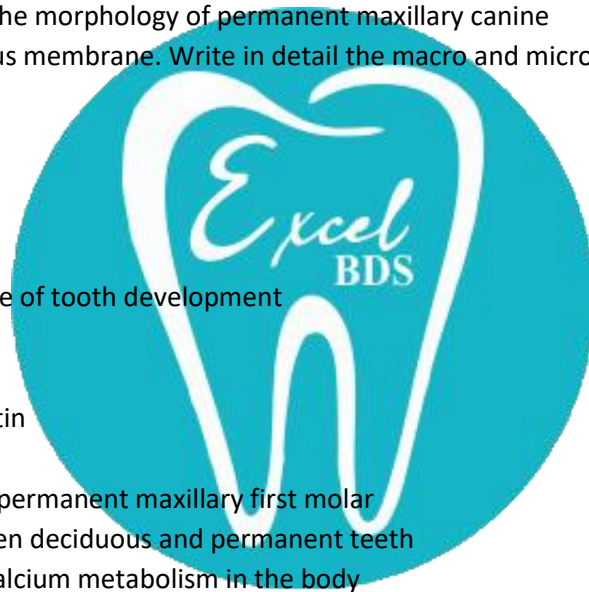
Draw neat labeled diagrams wherever necessary.

### LONG ESSAY\*

- Describe in detail the morphology of permanent maxillary canine
- Classify oral mucous membrane. Write in detail the macro and microscopic features of Gingiva

### \*SHORT ESSAY\*

- Advanced bell stage of tooth development
- Functions of Pulp
- Striated duct
- Age change in dentin
- Nonkeratinocytes
- Occlusal aspect of permanent maxillary first molar
- Differences between deciduous and permanent teeth
- Factors affecting calcium metabolism in the body



### \*SHORT ANSWERS\*

- Circumvallate papilla
- Howships lacunae
- Curve of spee
- Lateral pterygoid
- Epithelial rests

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – Dec 2011

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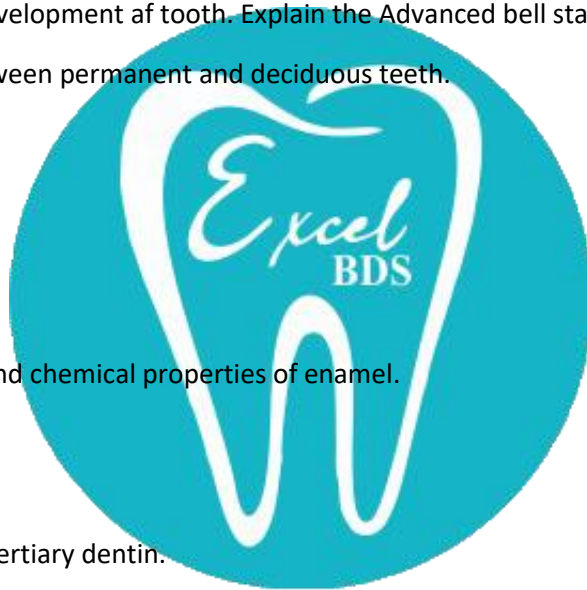
Draw neat labeled diagrams wherever necessary.

### LONG ESSAY

- Brief the stages in the development of tooth. Explain the Advanced bell stage with suitable diagram.
- Write the difference between permanent and deciduous teeth.

### SHORT ESSAY

- Histology of pulp.
- Nerve supply of tongue.
- Physical characteristics and chemical properties of enamel.
- Functions of saliva.
- Gingiva.
- Primary, secondary and tertiary dentin.
- Cellular cementum.
- Development of upper and lower lip.



### SHORT ANSWERS

- Normal serum calcium level.
- Myoepithelial cells.
- Theories of tooth eruption.
- Decalcifying agents.
- Define- fissure, ridge.

# Rajiv Gandhi University of Health Sciences, Karnataka

I B.D.S Degree Examination – June/July 2010

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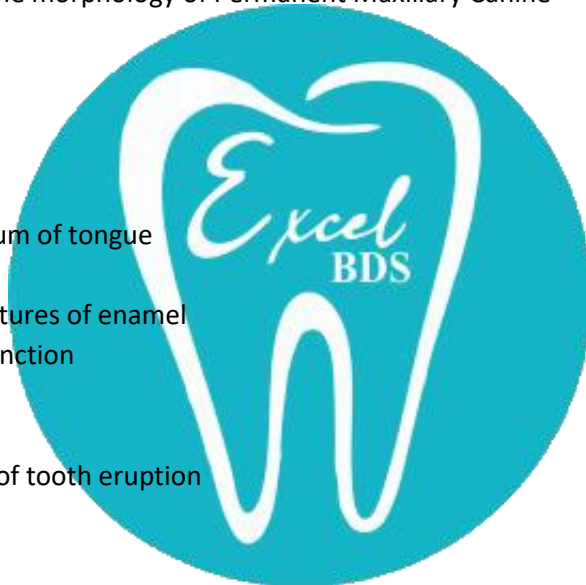
Draw neat labeled diagrams wherever necessary.

### **\*LONG ESSAY\***

- Classify Oral mucosa. Write in detail on Masticatory mucosa
- Describe in detail the morphology of Permanent Maxillary Canine

### **\*SHORT ESSAY\***

- Structures on dorsum of tongue
- Formation of root
- Hypocalcified structures of enamel
- Cementoenamel junction
- Functions of pulp
- Functions of saliva
- Fibronexus theory of tooth eruption
- Alveolar process



### **\*SHORT ANSWERS\***

- FDI System
- Cusp of Carabelli
- Interglobular dentin
- Cell rests of Malassez
- Mental nerve

# Rajiv Gandhi University of Health Sciences, Karnataka

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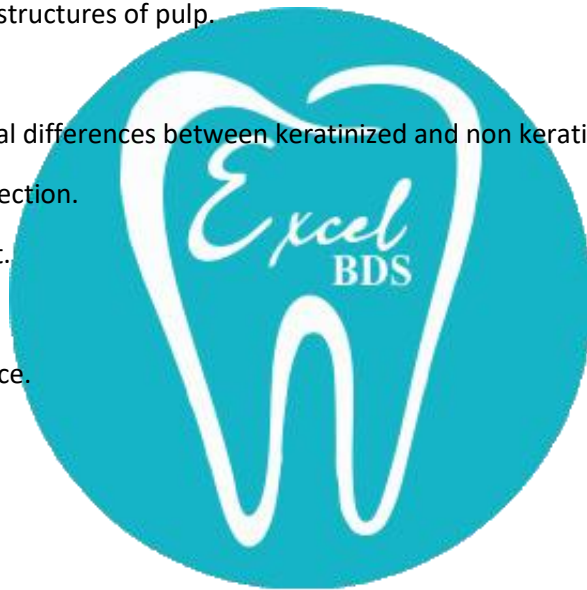
Draw neat labeled diagrams wherever necessary.

### LONG ESSAY

- Describe in detail the morphology of Permanent Maxillary first premolar.
- Describe the histological structures of pulp.

### SHORT ESSAY

- Functional and histological differences between keratinized and non keratinized mucosa.
- Types of dentin in cross section.
- Functions of striated duct.
- Hypercementosis.
- Elevations on tooth surface.
- Muscles of mastication.
- Dental lamina.
- Theories of calcification.



### SHORT ANSWERS

- Functions of teeth.
- Pit and fissure.
- Primary and secondary cuticles.
- Histology of maxillary sinus.
- Osteon.

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