



# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: INTRODUCTION TO STRUCTURES OF ORAL TISSUES

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction to oral biology & structure of tooth	<ul style="list-style-type: none"> <li>Relate the application of subject of oral biology with the clinical practice</li> <li>List tissues of the tooth</li> <li>Distinguish between dental tissues</li> <li>Locate dental hard tissues correctly</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> <li>Tutorial</li> <li>Practical (model demonstration)</li> </ul>	<ul style="list-style-type: none"> <li>Quiz</li> <li>Class Test</li> <li>Final Examination theory</li> <li>OSPE</li> </ul>
2	Introduction to the supporting structure of tooth	<ul style="list-style-type: none"> <li>Discuss briefly supporting structures of tooth</li> <li>Recognize the supporting structures of tooth</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> <li>Tutorial</li> <li>Practical (model demonstration)</li> </ul>	<ul style="list-style-type: none"> <li>Class Test</li> <li>Final Examination theory</li> <li>OSPE</li> </ul>
3	Age changes & clinical relevance of the structure of tooth 1	<ul style="list-style-type: none"> <li>Discuss the clinical relevance &amp; age changes of enamel &amp; dentine</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Final Examination theory</li> <li>OSPE</li> </ul>
4	Age changes & clinical relevance of the structure of tooth 2	<ul style="list-style-type: none"> <li>Discuss the clinical relevance &amp; age changes of cementum , periodontal ligament</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Final Examination theory</li> <li>OSPE</li> </ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: General Embryology

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Germ cell Formation and Fertilization, Prenatal Development, Induction, Competence, and Differentiation.	<ul style="list-style-type: none"><li>• Discuss the concept of germ &amp; formation &amp; fertilization , prenatal development</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Final Examination theory</li></ul>
2	Formation of Three Layered Embryo, Formation of the Neural Tube and Fate of the Germ Layers .	<ul style="list-style-type: none"><li>• Discuss the concept of Formation of Three Layered Embryo &amp; neural tube</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Final Examination theory</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Embryology of Head face and Oral Cavity

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Neural Crest Cells and Head Formation, Branchial (Pharyngeal) Arches and the Primitive Mouth .	<ul style="list-style-type: none"><li>• Explain the formation of head</li><li>• List the derivatives of Pharyngeal Arches and pouches</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li></ul>
2	Formation of the Face, Formation of the Secondary Palate.	<ul style="list-style-type: none"><li>• Explain the formation of face &amp; palate</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li></ul>
3	Formation of the Tongue,	<ul style="list-style-type: none"><li>• Discuss the formation of tongue</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li></ul>
4	Development of the Skull	<ul style="list-style-type: none"><li>• Discuss the development of skull</li><li>• Differentiate between intra membranous &amp; cartilaginous development</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li></ul>
5	Development of the Mandible and Maxilla	<ul style="list-style-type: none"><li>• Discuss the development of mandible &amp; maxilla</li><li>• Differentiate between the development of mandible &amp; maxilla</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

6	Development of the Temporomandibular Joint	<ul style="list-style-type: none"> <li>• Discuss the development of Temporomandibular Joint</li> <li>• Locate the anatomical landmarks associated with TMJ</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Class Test</li> <li>• Final Examination theory</li> <li>• OSPE</li> </ul>
7	Congenital Defects	<ul style="list-style-type: none"> <li>• List different types of teratogens</li> <li>• Explain various types of cleft lip &amp; palate</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Class Test</li> <li>• Final Examination theory</li> </ul>

### COURSE TOPIC: Cytoskeleton, Cell Junctions, Fibroblasts, and Extracellular Matrix

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	CYTOSKELETON, INTERCELLULAR JUNCTIONS, EPITHELIUM-CONNECTIVE TISSUE INTERFACE .	<ul style="list-style-type: none"> <li>• Define the cytoskeleton</li> <li>• Differentiate between various filament types within cytoskeleton</li> <li>• Distinguish between various intercellular junctions</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Class Test</li> <li>• Final Examination theory</li> </ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

2	FIBROBLASTS , Secretary Products of Fibroblasts	<ul style="list-style-type: none"> <li>Discuss the functions &amp; secretory products of fibroblast</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Class Test</li> <li>Final Examination theory</li> </ul>
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### COURSE TOPIC: Development of the Tooth and Its Supporting Tissues

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Stages of tooth development	<ul style="list-style-type: none"> <li>Discuss the formation of primary epithelial band</li> <li>Describe the formation of dental &amp; vestibular lamina</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> <li>Tutorial</li> <li>Practical (histological slide)</li> </ul>	<ul style="list-style-type: none"> <li>Quiz</li> <li>Class Test</li> <li>Individual Assignment</li> <li>Final Examination theory</li> <li>OSPE</li> </ul>
2	Stages of tooth development & Tooth Type Determination	<ul style="list-style-type: none"> <li>Differentiate various stages of tooth development</li> <li>Discuss the theories of tooth type determination</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> <li>Tutorial</li> <li>Practical (histological slide)</li> </ul>	<ul style="list-style-type: none"> <li>Quiz</li> <li>Class Test</li> <li>Individual Assignment</li> <li>Final Examination theory</li> </ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

				<ul style="list-style-type: none"><li>• OSPE</li></ul>
3	Hard Tissue Formation & Root Formation .	<ul style="list-style-type: none"><li>• State the hard tissue formation</li><li>• Discuss the formation of root</li><li>• Distinguish between development of single rooted &amp; multi rooted tooth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slide)</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Individual Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Bone

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Gross Bone Histology & bone cells	<ul style="list-style-type: none"><li>• state the composition of bone</li><li>• describe the histology of bone</li><li>• explain the structure &amp; functions of bone cells</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slide)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
2	Development of bone	<ul style="list-style-type: none"><li>• differentiate between endochondral &amp; intramembranous bone formation</li><li>• interpret the histology of endochondral &amp; intramembranous bone</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slide)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Enamel: Composition, Formation, and Structure

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction to enamel	<ul style="list-style-type: none"><li>• Discuss the composition &amp; physical properties of enamel</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Class Participation</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
2	Stages of Amelogenesis & Mineralization	<ul style="list-style-type: none"><li>• Discuss the stages of Amelogenesis</li><li>• Differentiate among the stages of Amelogenesis</li><li>• Explain various secretory products during Amelogenesis and mineralization</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
3	Structural And Organizational Features Of Enamel	<ul style="list-style-type: none"><li>• Identify &amp; discuss the histological features of enamel</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slide)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>



# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Dentin-Pulp Complex

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction, types , dentine formation	<ul style="list-style-type: none"><li>• Know the basic composition of dentine</li><li>• Describe the formation of dentine</li><li>• Report the pattern of dentine formation</li><li>• Recognize the types of dentine</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
2	Histology Of Dentin	<ul style="list-style-type: none"><li>• Recognize &amp; explain various histological landmarks present in the dentine</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
3	Pulp & cells of dental pulp	<ul style="list-style-type: none"><li>• Recognize &amp; explain the zones within the dental pulp</li><li>• Explain the cells that are present the dental pulp</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
4	Theories of Dentin Sensitivity	<ul style="list-style-type: none"><li>• Explain the theories of dentine sensitivity</li><li>• Criticize the theories of dentine sensitivity</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Periodontium

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction to periodontium & Biochemical Composition of cementum	<ul style="list-style-type: none"><li>Define the periodontium</li><li>List the components of periodontium</li><li>Explain the biochemical composition of cementum</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li><li>Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Individual Assignment</li><li>Final Examination theory</li><li>OSPE</li></ul>
2	Cementum formation & Types of cementum	<ul style="list-style-type: none"><li>Explain the formation of cementum</li><li>Classify the cementum into different types</li><li>Explain the factors that regulate cementum formation</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li><li>Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Individual Assignment</li><li>Final Examination</li><li>OSPE</li></ul>
3	Alveolar bone	<ul style="list-style-type: none"><li>Explain the structure of alveolar bone</li><li>Recognize the histological features within the alveolar bone</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li><li>Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Final Examination</li><li>OSPE</li></ul>
4	Periodontal Ligaments	<ul style="list-style-type: none"><li>Classify the periodontal ligaments</li><li>Explain the cells within the periodontal ligaments space</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li><li>Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Final Examination</li><li>OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Physiologic Tooth Movement: Eruption and Shedding

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Preeruptive Tooth Movement & Eruptive Tooth Movement .	<ul style="list-style-type: none"><li>Describe Preeruptive tooth movement</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Final Examination Theory</li></ul>
2	Posteruptive Tooth Movement & Abnormal Tooth Movement .	<ul style="list-style-type: none"><li>Describe posteruptive &amp; abnormal tooth movement with examples</li><li>Discuss the orthodontic tooth movement</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Final Examination Theory</li></ul>
3	Shedding Of Teeth	<ul style="list-style-type: none"><li>Explain the shading of teeth &amp; pattern of shading</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Final Examination Theory</li></ul>

### COURSE TOPIC: Salivary Glands

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Anatomy , development & functions of salivary glands	<ul style="list-style-type: none"><li>Explain briefly the anatomy of salivary glands</li><li>Explain the composition of saliva</li><li>Relate the composition of saliva with functions</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Tutorial</li><li>Practical (model demonstration)</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Group Assignment</li><li>Final Examination theory</li><li>OSPE</li></ul>
2	Histology Of The Major &		<ul style="list-style-type: none"><li>Lectures</li></ul>	<ul style="list-style-type: none"><li>Class Test</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

	Minor Salivary Glands	<ul style="list-style-type: none"><li>• Classify salivary glands</li><li>• Differentiate between secretory cells of salivary glands</li><li>• Know the mechanism &amp; secretion of saliva</li><li>• Recognize the histological features of salivary glands</li></ul>	<ul style="list-style-type: none"><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Group Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
3	Clinical Considerations	<ul style="list-style-type: none"><li>• Know briefly the age changes &amp; diseases associated with the salivary glands</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Group Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Oral Mucosa

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Definition Boundaries & Functions Of The Oral Mucosa	<ul style="list-style-type: none"><li>• Define oral mucosa</li><li>• Know the boundaries of oral cavity</li><li>• Explain the structure of oral mucosa</li><li>• Relate the structure with the functions of oral mucosa</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
2	Structural variations of oral mucosa, Oral Epithelium & Lamina Propria.	<ul style="list-style-type: none"><li>• Classify different types of oral mucosa</li><li>• Differentiate histological between different types</li><li>• Explain the cells within the epithelium &amp; connective tissue</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (histological slides)</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
3	Clinical variations & Age Changes in oral mucosa	<ul style="list-style-type: none"><li>• Know the clinical variations &amp; age changes within the oral mucosa</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Temporomandibular Joint

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Classification Of Joints Anatomy & histology of temporomandibular joint	<ul style="list-style-type: none"><li>• Explain the classification of joint with examples</li><li>• Discuss the anatomy &amp; histology of temporomandibular joint</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>
2	Muscles Of Mastication & Biomechanics, Innervations & Blood Supply To TMJ	<ul style="list-style-type: none"><li>• Explain the muscle associated with temporomandibular joint</li><li>• Relate the muscle attachments with movement of joint</li><li>• Know the innervations &amp; blood supply of TMJ</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

### COURSE TOPIC: Facial Growth and Development

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Facial Types & Profiles	<ul style="list-style-type: none"><li>• Discuss various facial types &amp; profiles</li><li>• Relate the facial profiles with gender &amp; age</li><li>• Know the basic concept of facial growth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Group Assignment</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Repair and Regeneration of Oral Tissues

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Wound Healing In Oral Mucosa	<ul style="list-style-type: none"><li>• Discuss various faces of bone healing in oral mucosa</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>
2	Repair of tooth & supporting structures 1	<ul style="list-style-type: none"><li>• Explain the bone healing act dentinogingival junction</li><li>• Know the mechanism of enamel repair</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>
3	Repair of tooth & supporting structures 2	<ul style="list-style-type: none"><li>• Know the repair of dentine pulp complex</li><li>• Explain the repair of periodontium</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Introduction to Dental Anatomy

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction to Dental Anatomy 1	<ul style="list-style-type: none"><li>• Know the clinical application &amp; importance of oral biology/dental anatomy</li><li>• Explain &amp; identify the primary, transitional &amp; permanent dentition periods</li><li>• Know tooth rotation systems</li><li>• Apply the knowledge of tooth rotation systems</li><li>• Know surfaces &amp; landmarks associated with human teeth</li><li>• Identify surfaces &amp; landmarks associated with human teeth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical (demonstration on models)</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Group Assignment</li><li>• Final Examination theory</li><li>• OSPE</li></ul>

### COURSE TOPIC: Development and Eruption of the Teeth

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Development And Eruption/ Emergence Of The primary & permanent teeth	<ul style="list-style-type: none"><li>• Know the pattern &amp; age of eruption of primary</li><li>• Know the pattern &amp; age of eruption of permanent teeth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Group Assignment</li><li>• Final Examination</li></ul>



# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

		<ul style="list-style-type: none"><li>• Estimate the dental age of an individual</li></ul>		
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### COURSE TOPIC: The Primary (Deciduous) Teeth

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Maxillary Central Incisor & Maxillary Lateral Incisor	<ul style="list-style-type: none"><li>• Identify the maxillary central &amp; lateral incisor</li><li>• Explain briefly the landmarks associated with these teeth</li><li>• Know the basic endodontic anatomy of these teeth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Class Participation</li><li>• Final Examination</li></ul>
2	Mandibular Central Incisor & Mandibular Lateral Incisor	<ul style="list-style-type: none"><li>• Identify the mandibular central &amp; lateral incisor</li><li>• Explain briefly the landmarks associated with these teeth</li><li>• Know the basic endodontic anatomy of these teeth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Class Participation</li><li>• Final Examination</li></ul>
3	Maxillary Canine & Mandibular Canine	<ul style="list-style-type: none"><li>• Identify the maxillary &amp; mandibular canines</li><li>• Explain briefly the landmarks associated with these teeth</li><li>• Know the basic endodontic anatomy of these teeth</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Class Test</li><li>• Class Participation</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

4	Maxillary First Molar & Maxillary Second Molar	<ul style="list-style-type: none"> <li>• Identify the maxillary first molar &amp; maxillary second molar</li> <li>• Explain briefly the landmarks associated with these teeth</li> <li>• Know the basic endodontic anatomy of these teeth</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> <li>• Practical</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• Class Test</li> <li>• Class Participation</li> <li>• Final Examination</li> </ul>
5	Mandibular First Molar & Mandibular Second Molar	<ul style="list-style-type: none"> <li>• Identify the mandibular first molar &amp; mandibular second molar</li> <li>• Explain briefly the landmarks associated with these teeth</li> <li>• Know the basic endodontic anatomy of these teeth</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> <li>• Practical</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• Class Test</li> <li>• Class Participation</li> <li>• Final Examination</li> </ul>

### COURSE TOPIC: Forensics, Comparative Anatomy, Geometries, and Form and Function

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Introduction & application of Forensic Dentistry	<ul style="list-style-type: none"> <li>• Define forensic dentistry</li> <li>• Know various methods for identification of unidentified individuals</li> <li>• Know the application of forensic dentistry</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Quiz</li> <li>• Group Assignment</li> <li>• Final Examination</li> </ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Orofacial Complex: Form and Function

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Physiological Form Of The Teeth And Periodontium	<ul style="list-style-type: none"><li>• Know the Physiological Form Of The Teeth And Periodontium</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>
2	Contact Areas , Interproximal Spaces & Embrasures	<ul style="list-style-type: none"><li>• Explain Contact Areas , Interproximal Spaces &amp; Embrasures</li><li>• Identify Contact Areas , Interproximal Spaces &amp; Embrasures</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: The Permanent Maxillary Incisors

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Maxillary Central Incisor	<ul style="list-style-type: none"><li>• Identify maxillary central incisor</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
2	Maxillary Lateral Incisors	<ul style="list-style-type: none"><li>• Identify maxillary lateral incisor</li><li>• Differentiate between maxillary central &amp; lateral incisors</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: The Permanent Mandibular Incisors

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Mandibular Central Incisor	<ul style="list-style-type: none"><li>Identify mandibular central incisor</li><li>Know the landmarks associated with this tooth</li><li>Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Practical</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Individual Assignments</li><li>Final Examination</li></ul>
2	Mandibular Lateral Incisor	<ul style="list-style-type: none"><li>Identify mandibular lateral incisor</li><li>Differentiate between mandibular central &amp; lateral incisors</li><li>Know the landmarks associated with this tooth</li><li>Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Practical</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Individual Assignments</li><li>Final Examination</li></ul>

### COURSE TOPIC: The Permanent Canines: Maxillary and Mandibular

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Maxillary Canine	<ul style="list-style-type: none"><li>Identify maxillary canine</li><li>Know the landmarks associated with this tooth</li><li>Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>Lectures</li><li>Practical</li></ul>	<ul style="list-style-type: none"><li>Class Test</li><li>Individual Assignments</li><li>Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

2	Mandibular Canine	<ul style="list-style-type: none"><li>• Identify mandibular canine</li><li>• Differentiate between maxillary canine &amp; mandibular canine</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
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## COURSE TOPIC: The Permanent Maxillary Premolars

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Maxillary First Premolar	<ul style="list-style-type: none"><li>• Identify maxillary first premolar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
2	Maxillary second premolar	<ul style="list-style-type: none"><li>• Identify maxillary second premolar</li><li>• Differentiate between maxillary first &amp; second premolar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: The Permanent Mandibular Premolars

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Mandibular First Premolar	<ul style="list-style-type: none"><li>• Identify mandibular first premolar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
2	Mandibular Second Premolar	<ul style="list-style-type: none"><li>• Identify mandibular second premolar</li><li>• Differentiate between mandibular first &amp; second premolar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: The Permanent Maxillary Molars

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Maxillary First Molar	<ul style="list-style-type: none"><li>• Identify maxillary first molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
2	Maxillary Second Molar	<ul style="list-style-type: none"><li>• Identify maxillary second molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
3	Maxillary Third Molar	<ul style="list-style-type: none"><li>• Identify maxillary third molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>



# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: The Permanent Mandibular Molars First, Second and Third Molars

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Mandibular First Molar	<ul style="list-style-type: none"><li>• Identify Mandibular first molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
2	Mandibular Second Molar	<ul style="list-style-type: none"><li>• Identify mandibular second molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>
3	Mandibular Third Molar	<ul style="list-style-type: none"><li>• Identify mandibular third molar</li><li>• Know the landmarks associated with this tooth</li><li>• Know the basic endodontic anatomy</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Class Test</li><li>• Individual Assignments</li><li>• Final Examination</li></ul>

# JINNAH SINDH MEDICAL UNIVERSITY

## Oral Biology Curriculum

Ref# CURRICULUM MEETING/JSMU/2016-17/10

Dated: 14-06-17

### COURSE TOPIC: Dento-osseous Structures, Blood Vessels, and Nerves

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Structure of Maxilla & Mandible	<ul style="list-style-type: none"><li>• Know the gross anatomy of maxillary bone</li><li>• Know the gross anatomy of mandible</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>
2	Arterial Supply & Nerve Supply to the Jaws and Teeth	Know Arterial Supply & Nerve Supply to the Jaws and Teeth	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>

### COURSE TOPIC: Occlusion

S. No	Lecture Topic	Topic Objectives	Mode of Teaching	Assessment Tools
1	Basics of the Primary Occlusion	<ul style="list-style-type: none"><li>• Know the basic concepts of occlusion</li><li>• Explain the details of primary occlusion</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>
2	Basics of the Permanent Occlusion	<ul style="list-style-type: none"><li>• Know the basic concepts of occlusion</li><li>• Explain the details of occlusion</li></ul>	<ul style="list-style-type: none"><li>• Lectures</li><li>• Tutorial</li><li>• Practical</li></ul>	<ul style="list-style-type: none"><li>• Final Examination</li></ul>

# **JINNAH SINDH MEDICAL UNIVERSITY**

## **Oral Biology Curriculum**

**Ref# CURRICULUM MEETING/JSMU/2016-17/10**

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