

**DR.M.G.R EDUCATIONAL & RESEARCH INSTITUTE UNIVERSITY**  
**DEPARTMENT OF CONSERVATIVE AND ENDODONTICS**

<b>Subject Code:</b>	<b>Subject Name : Conservative and endodontics</b>	<b>T / L/ ETL</b>	<b>L</b>	<b>T / S.Lr</b>	<b>P/ R</b>
	Prerequisite:	T			

L : Lecture T : Tutorial SLr : Supervised Learning P : Project R : Research C: Credits  
T/L/ETL : Theory/Lab/Embedded Theory and Lab.

**OBJECTIVE:**

1. Competent to diagnose all carious lesions.
2. Competent to perform Class I and Class II cavities and their restoration with amalgam.
3. Restore class V and Class III cavities with glass ionomer cement.
4. Able to diagnose and appropriately treat pulpally involved teeth (pulp capping procedures).
5. Able to perform RCT for anterior teeth.
6. Competent to carry out small composite restorations.
7. Understand the principles of aesthetic dental procedures

**SKILLS:**

- To use medium and high speed hand pieces to carry out restorative work.
- Poses the skills to use and familiarize endodontic instruments and materials needed for carrying out simple endodontic treatment.
- To achieve the skills to translate patients esthetic needs along with function.

**ATTITUDES:**

- i). Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
- ii). Willingness to participate in CDE program to update the knowledge and professional skill from time to time.
- iii). To help and participate in the implementation of the national oral health policy.
- iv). He should be able to motivate the patient for proper dental treatment at the same time proper maintenance of oral hygiene should be emphasize which will help to maintain the restorative work and prevent future damage.

**COURSE OUTCOMES (COs) : ( 3- 5)**

<b>CO1</b>	To diagnose and treat simple restorative work for teeth.
<b>CO2</b>	To gain knowledge about aesthetic restorative material and to translate the same to patients needs.
<b>CO3</b>	To gain the knowledge about endodontic treatment on the basis of scientific foundation
<b>CO4</b>	To carry out simple endodontic treatment.
<b>CO5</b>	To carry out simple luxation of tooth and its treatment and to provide emergency endodontic treatment.

**Mapping of Course Outcomes with Program Outcomes (POs)**

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M	M	M	H	H	H	H	H	L	H	H	M
CO2	M	M	M	H	H	H	H	H	L	H	H	M
CO3	M	M	M	H	H	H	H	H	L	H	H	M
CO4	M	M	M	H	H	H	H	H	L	H	H	M
CO5	M	M	M	H	H	H	H	H	L	H	H	M
COs /PSOs	PSO1	PSO2	PSO3	PSO4								
CO1	H	H	M	M								
CO2	H	H	M	M								
CO3	H	H	M	M								
CO4	H	H	M	M								
CO5	H	H	M	M								

**H/M/L indicates Strength of Correlation H- High, M- Medium, L-Low**

Category	Basic Sciences	Medical and Allied Health Science	Humanities and Social Sciences	Program Core	Program Electives	Open Electives	Practical / Project	Internships / Technical Skill	Soft Skills
				✓					
Approval									

Revised B.D.S regulation 2007 approved by dental council of India.

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### DEPARTMENT OF CONSERVATIVE AND ENDODONTICS

**UNIT 1.** Introduction -Nomenclature Of Dentition-Tooth numbering systems- A.D.A. Zsigmondy Palmer F.D.I.systems.

**UNIT 2.** Principles Of Cavity Preparation -Steps and nomenclature -classification of cavities- floors angles of cavities.

**UNIT 3.** Dental Caries-Aetiology, classification clinical features, morphological features, microscopic features, clinical diagnosis and sequel of dental caries.

**UNIT 4.** Treatment Planning For Operative Dentistry-Detailed clinical examination , radiographic examination, tooth vitality tests, diagnosis-treatment planning, preparation of the case sheet.

**UNIT 5.** Gnathological Concepts Of Restoration: Physiology of occlusion, normal occlusion, Ideal occlusion, mandibular movements and occlusal-analysis- Occlusal rehabilitation and restoration.

**UNIT 6.** Aramamentarium For Cavity Preparation: General classification of operative instruments, Hand cutting instruments design formula-sharpening of instruments- Rotary cutting instruments dental bur, mechanism of cutting, evaluation of hand piece and speed current concepts of rotary cutting procedures. Sterilization,maintenance of instruments.-Basic instrument tray set up.

**UNIT 7.** Control of Operating Filed: Light source sterilisation field of operation control of moisture, rubber dam in detail, cotton rolls-anti sialogagues.

**UNIT 8.** Amalgam Restoration : Indication contraindication, physical and mechanical properties , clinical behaviour. Cavity preparation for Class I , II, V and III. Step wise procedure for cavity preparation and restoration-Failure of amalgam restoration.

**UNIT 9.** Pulp Protection : Liners, varnishes and bases, Zinc phosphate, zinc polycarboxylate, zinc oxide eugenol and glass inomer cements.

**UNIT 10.** Anterior Restorations : Selection of cases, selection of material, step wise procedures for using restorations , silicate -theory only- glass inomers, composites, including sand witch restorations and bevels of the same with a note on status of the dentine bonding agents.

**UNIT 11.** Direct Filling Gold Restorations : Types of direct filling gold indications and limitations of cohesive gold-Annealing of gold foil cavity preparation and condensation of gold foils.

**UNIT 12.** Preventive Measures In Restorative Practice : Plaque Control, Pitand fissure sealants- dietary measures restorative procedure and periodontal health.-Contact and contour of teeth and restorations matrices tooth separation and wedges.

**UNIT 13.** Temporisation or Interim Restoration.

**UNIT 14.** Pin Amalgam Restoration Indication Contra Indication : Advantages disadvantages -auto matrix.-Failure of pin amalgam restoration.

**UNIT 15.** Management Of Deep Carious Lesions Indirect And Direct Pulp Capping.

**UNIT 16.** Non Carious Destruction's Tooth Structures Diagnosis and Clinical Management

**UNIT 17.** Hyper Sensitive Dentine And Its Management.

**UNIT 18.** Cast Restorations -Indications, contra indications, advantages and disadvantages and materials -Class II and Class I cavity preparation -inlays fabrication - wax pattern spurring-casting procedures & casting defects

**UNIT 19.** Die Materials And Preparation Of Dies.

**UNIT 20.** Gingival Tissue Management For Cast Restoration And Impression Procedures

**UNIT 21.** Recent Cavity Modification Amalgam Restoration.

**UNIT 22.** Differences between Amalgam And Inlay Cavity preparation -types of Bewels-used for Cast Restoration.

**UNIT 23.** Control Of Pain During Operative Procedures.

**UNIT 24.** Treatment Planning For Operative Dentistry Detailed Clinical Examination Radiographic Examination

**UNIT 25.** Vitality Tests, Diagnosis And Treatment Planning And Preparation Of Case Sheet.

**UNIT 26.** Applied Dental Materials- Biological Considerations-Evaluation, clinical application and adverse effects - Dental cements, Zinc oxide euginol cements zinc phosphate cements, polycarboxylates glass ionomer cements, silicate cement calcium hydroxides varnishe- Dental amalgam, technical considerations mercury toxicity -hygiene- Composite, Dentine bonding agents, chemical and light curing composites-Rubber base Imp. Materials-Nobel metal alloys & non noble metal alloys- Investment and die materials- Inlay casting wax-Dental porcelain-Aesthetic Dentistry

**UNIT 27.** Endodontics: introduction definition scope and future of endodontics

**UNIT 28.** Clinical diagnostic methods

**UNIT 29.** Emergency endodontic procedures

**UNIT 30.** Pulpal diseases causes, types and treatment .

**UNIT 31.** Periapical diseases: acute periapical abscess, acute periodontal abscess phoeix abscess, chronic alveolar abscess granuloma cysts condensing osteitis, external resorption.

**UNIT 32.** Vital pulp therapy: indirect and direct pulp capping pulpotomy different types and medicaments.

**UNIT 33.** Apexogenesis and apexification or problems of open apex.

**UNIT 34.** Rationale of endodontic treatment case selection indication and contraindications for root canal treatments.

**UNIT 35.** Principles of root canal treatment mouth preparation root canal instruments, hand instruments, power driven instruments, standardisation color coding principle-endodontic instruments-Sterilisation of root canal instruments-materials rubber dam application.

**UNIT 36.** Anatomy of the pulp cavity: root canals apical foramen.-Anomalies of pulp cavities access cavity preparation-anterior and premolar teeth.

**UNIT 37.** Preparation of root canal space-Determination of working length, cleaning and shaping of root canals, irrigating solution chemical aids to instrumentation.

**UNIT 38.** Disinfection of root canal space intracanal medicaments, poly antibiotic paste ross mans paste, mummifying agents. Outline of root canal treatment, bacteriological examinations, culture methods.

**UNIT 39.** Problems during cleaning and shaping of root canal spaces. Perforation and its management-Broken instruments-management of single-double curved root canals.

**UNIT 40.** Methods of cleaning and shaping like step back crown down and conventional methods.

**UNIT 41.** Obturation of the root canal system. Requirements of an ideal root canal filling material obturation methods using gutta percha healing after endodontic treatment. Failures in endodontics.

**UNIT 42.** Root canal sealers. Ideal properties classification- Manipulation of root canal sealers.

**UNIT 43.** Post endodontic restoration fabrication and components of post core preparation.

**UNIT 44.** Smear layer and its importance in endodontics and conservative treatment.

**UNIT 45.** Discoloured teeth and its management.-Bleaching agents, vital and non- vital bleaching methods.

**UNIT 46.** Traumatized teeth classification of fractured teeth-Management of fractured tooth and root-luxated teeth.

**UNIT 47.** Endodontic surgeries indication contraindications, pre-operative preparation. Pre medication surgical instruments-techniques apicectomy, retrograde filling-post-operative sequale terphination hemisection, radiscetomy techniques-reimplantation -endodontic implants.

**UNIT 48.** Root resorption

**UNIT 49.** Emergency endodontic procedures.

**UNIT 50.** Lasers in conservative endodontics (introduction only) practice management

**UNIT 51.** Professional association dentist act 1948 and its amendment 1993- Duties towards the govt. Like payments of professional tax, income tax- Financial management of practice- Dental material and basic equipment management-thics.

**TOTAL HOURS: LECTURE-135,PRACTICAL-200,CLINICAL-370**

**RECOMMENDED BOOKS:**

1. Esthetic guidelines for restorative dentistry; Scharer & others
2. Esthetics of anterior fixed prosthodontics; Chiche (GJ) & Pinault (Alain)
3. Esthetic & the treatment of facial form, Vol 28; Mc Namara (JA)