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Approval									

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

DR.M.G.R EDUCATIONAL & RESEARCH INSTITUTE UNIVERSITY

DEPARTMENT OF ORTHODONTICS & DENTAL ORTHOPAEDICS

UNIT1. Introduction, Definition, Historical Background, Aims And Objectives Of Orthodontics-Need For Orthodontics Care.

UNIT 2. Growth And Development: Definition-Growth spurts and Differential growth-Factors influencing growth and Development-Methods of measuring growth-Growth theories-Genetic and epigenetic factors in growth-Cephalocaudal gradient in growth.

UNIT 3. Morphologic Development Of Craniofacial Structure- Methods of bone growth-Prenatal growth of craniofacial structures-Postnatal growth and development of: cranial base, maxilla, mandible, dental-arches and occlusion.

UNIT 4. Functional Development Of Dental Arches And Occlusion-Factors influencing functional development of dental arches and occlusion-Forces of occlusion-Wolfe's law of transformation of bone-Trajectories of forces

UNIT 5. Clinical Application Of Growth And Development

UNIT 6. Malocclusion - In General- Concept of normal occlusion- Definition of malocclusion-Description of different types of dental, skeletal and functional malocclusion.

UNIT 7. Classification of Malocclusion

Principle, description, advantages and disadvantages of classification of malocclusion by Angle's, Simon's, Lischer's and Ackerman and Proffit's.

UNIT 8. Normal And Abnormal Function Of Stomatognathic System

UNIT 9. Etiology Of Malocclusion-Definition, importance, classification, local and general etiological factors- Etiology of different types of malocclusion.

UNIT 10. Diagnosis And Diagnostic Aids-Definition, Importance and classification of diagnostic aids-Importance of case history and clinical examination in orthodontics-Study Models-Importance and uses - Preparation and preservation of study models -Importance of intraoral X-rays in orthodontics-Panoramic radiographs: - Principles, Advantages, disadvantages and uses- Cephalometrics: Its advantages, disadvantages-Definition- Description and use of cephalostat- Description and uses of anatomical landmarks lines and angles used in cephalometric analysis- Analysis- Steiner's, Down's, Tweed's, Ricket's-E- line-Electromyography and its uses in orthodontics-Wrist X-rays-importance in orthodontics.

UNIT 11-General Principles In Orthodontic Treatment Planning Of Dental And Skeletal Malocclusions

UNIT 12Anchorage In Orthodontics - Definition, Classification, Types and Stability Of Anchorage

UNIT 13. Biomechanical Principles In Orthodontic Tooth Movement-Different types of tooth movements-Tissue response to orthodontic force application- Age factor in orthodontic tooth movement

UNIT 14. Preventive Orthodontics-definition-Different procedures undertaken in preventive orthodontics and their limitations.

UNIT 15. Interceptive Orthodontics-Definition- Different procedures undertaken in interceptive orthodontics-Serial extractions: Definition, indications, contra-indication, technique, advantages and disadvantages-Role of muscle exercises as an interceptive procedure

UNIT 16. Corrective Orthodontics-Definition, factors to be considered during treatment planning- Model analysis: Pont's, Ashley Howe's, Bolton, Careys, Moyer's Mixed Dentition Analysis-Methods of gaining space in the arch:- Indications-relative merits and demerits of proximal-stripping, arch expansion and extractions-Extractions in Orthodontics - indications and selection of teeth for extraction.

UNIT 17. Orthodontic Appliances: General Requisites for orthodontic appliances- Classification, indications of Removable and Functional Appliances-Methods of force application- Materials used in construction of various orthodontic appliances - uses of stainless-steel, technical considerations in curing of acrylic, Principles of welding and soldering,-fluxes and antfluxes-Preliminary knowledge of acid etching and direct bonding.-REMOVABLE ORTHODONTIC APPLIANCES-Components of removable appliances- Different types of clasps-Different types of labial bows and their uses-Different types of springs and their uses- Expansion appliances in orthodontics-Principles Indications for arch expansion-Description of expansion appliances and different types of expansion devices and their uses-Rapid maxillary expansion-FIXED ORTHODONTIC APPLIANCES-Definition, Indications & Contraindications-Component parts and their uses-Basic principles of different techniques: Edgewise, Begg's, straight

wire-EXTRAORAL APPLIANCES-Headgears-chincup-reverse pull headgears-MYOFUNCTIONAL APPLIANCES-
Definition and principles-Muscle exercises and their uses in orthodontics-Functional appliances-Activator, Oral
screens, Frankels function regulator-bionator twin blocks, lip bumper-Inclined planes - upper and lower.

UNIT 18. Orthodontic Management Of Cleft Lip And Palate

UNIT 19. Principles Of Surgical Orthodontics-Brief knowledge of correction -Mandibular Prognathism and
Retrognathism- Maxillary Prognathism-Retrognathism Anterior open bite and deep bite- Cross bite

UNIT 20. Principle, Differential Diagnosis & Methods Of Treatment Of: Midline diastema- Cross bite-Open bite-
Deep bite Spacing- Crowding-Class II - Division 1, Division2- Class III Malocclusion - True and Psuedo Class III

UNIT 21. Retention And Relapse-Definition, Need for retention, Causes of relapse, Methods of retention, Different
types of retention-devices, Duration of retention, Theories of retention.

UNIT 22. Ethics

TOTAL NUMBER OF HOURS: LECTURE-50,CLINICALS-170

RECOMMENDED BOOKS:

1. Contemporary Orthodontics William R. Proffit
2. Orthodontics For Dental Students White And Gardiner
3. Handbook Of Orthodontics Moyers
4. Orthodontics - Principles And Practice Graber
5. Design, Construction And Use Of Removable
6. Orthodontic Appliances C. Philip Adams
7. Clinical Orthodontics: Voll & 2 Salzman

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