

SECTION-II: ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS - 50 Marks

I. Applied Anatomy:

- Prenatal growth of head:
Stages of embryonic development, origin of head, origin of face, origin of teeth.
- postnatal growth of head:
Bones of skull, the oral cavity, development of chin, the hyoid bone, general growth of head, face growth.
- Bone growth:
Origin of bone, composition of bone, units of bone structure, schedule of ossification, mechanical properties of bone, roentgen graphic appearance of bone
- Assessment of growth and development:
Growth prediction, growth spurts, the concept of normality and. growth increments of growth, differential growth, gradient of growth, methods of gathering growth data. Theories of growth and recent advances , factors affecting physical growth.
- Muscles of mastication:
Development of muscles, muscle change during growth, muscle function and facial development, muscle function and malocclusion
- Development of dentition and occlusion:
Dental development periods, order of tooth eruption, chronology of permanent tooth formation, periods of occlusal development, pattern of occlusion.
- Assessment of skeletal age.
The carpal bones, carpal x - rays, cervical vertebrae

II. Physiology:

Endocrinology and its disorders
Calcium and its metabolism
Nutrition-metabolism and their disorders
Muscle physiology
Craniofacial biology
Bleeding Disorders

III. Applied dental materials, orthodontic wires, elastic etc.

IV. Applied genetics and physical anthropology

V. Applied pharmacology

VI. Concepts of occlusion and esthetics

VII. Etiology and classification of malocclusion:

VIII. Dentofacial anomalies

IX. Child and adult psychology

X. Diagnostic procedures cephalometric and treatment planning in orthodontics.

XI. Clinical orthodontics:

Removable appliances, Myofunctional Orthodontics, Fixed appliances.

XII. Dentofacial orthopedics

XII. Cleft lip and palate rehabilitation

XIV. Biology of tooth movement

XV. Orthodontic / orthognathic surgery

XVI. Ortho - perio - prosth/restorative inter relationship

XVII. Preventive and interceptive orthodontics.

XVIII

- Anchorage considerations in Orthodontics.
- Temporomandibular Joint in Health and Disease.

XIX. Recent advances like

Use of implants

Lasers

Application of Finite Element Method(F.E.M)

Distraction Osteogenesis

REFERENCE BOOKS:

1. Orthodontics Principles and Practice: Graber T.M.; 3rd edition
2. Contemporary Orthodontics: Proffit W.R: 2nd ed.
3. Orthodontics Principles and Practice:Graber:3rd ed.
4. Management of Temporomandibular Disorder's and Occlusion: Okeson J.P.
5. Systemized Ortho-treatment Mechanics: Mclaughlin Bennett
6. Dentofacial Orthopedics with Functional Appliance: Graber T.M