Contents

Section 1: Complete Dentures

1. Introduction to Complete Dentures 3
- History of Complete Denture *4*
- Components of a Complete Denture *5*

2. Diagnosis and Treatment Planning 16
- Diagnosis *17*
- Patient Evaluation *18*
- Clinical History Taking *22*
- Contraindications for Complete Denture *23*
- Dental History *23*
- Clinical Examination of the Patient *24*
- Radiographic Examination *44*
- Treatment Plan *45*
- Adjunctive Care *50*
- Prosthodontic Care *51*

3. Diagnostic Impressions in Complete Dentures 53
- Diagnostic Impression *54*
- Making the Diagnostic Cast *55*
- Analyzing the Diagnostic Cast *58*
- Surveying *59*

4. Mouth Preparation for CD 61
- Objectives of Mouth Prep *62*
- Non-surgical Methods *62*
- Surgical *63*
- Ridge Augmentation *66*

5. Primary Impressions in Complete Denture 69
- Introduction and Classification of Impressions *70*
- Anatomical Landmarks *73*
- Anatomical Landmarks in the Maxilla *75*
- Anatomical Landmarks in the Mandible *81*
- Principles of Impression Making *86*
- Objectives of Impression Making *86*
- Recording the Primary Impression *94*
- Refining the Primary Impression *97*
- Alternative Method *97*

6. Lab Procedures Prior to Master Impression Making 100
- Finishing the Primary Cast *101*
- Fabrication of a Special Tray *101*

7. Secondary Impressions in Complete Dentures **113**
- Techniques for Making the Master Impression *114*
- Making a Secondary Impression using a Special Tray *114*
- Inspecting the Impression *127*
- Disinfecting the Impression *127*
- Remaking the Impression *127*

8. Lab Procedures Prior to Jaw Relation **128**
- Preparing the Master Cast *129*
- Indexing the Master Cast *132*
- Fabricating the Temporary Denture Base *134*
- Stabilizing the Base Plates *140*
- Fabrication of Occlusal Rims *141*

9. Maxillomandibular Relations **147**
- Mandibular Movements *148*
- Customizing the Occlusal Rims *159*
- Orientation of the Plane of the Occlusal Rim *160*
- Jaw Relation *161*
- Vertical Jaw Relation *168*
- Horizontal Jaw Relation *176*
- Other Methods of Recording the Centric-Jaw Relation *190*

10. Lab Procedures Prior to Try-In **196**
- Articulators and Articulation *197*
- Classification *199*
- Structure of an Articulator *204*
- Mounting Procedure *210*
- Teeth Selection *213*
- Occlusion *228*
- Arrangement of Artificial Teeth *248*
- Wax Up *254*

11. Try-In **258**
- Definition *259*
- Procedure *259*
- Speech *261*

12. Lab Procedures Prior to Insertion **264**
- Denture Processing *265*
- Compression Moulding Technique *265*
- Injection-Moulding System *272*
- Microwave Processing *276*
- Finishing and Polishing the Denture *277*

13. Complete Denture Insertion **281**
- Checking for Fit and Function *282*
- Checking for the Fit of the Prosthesis *282*
- Patient Instructions *285*
- Tissue Conditioners *287*
- Use of Denture Adhesives *289*
- Sequelae of Wearing Complete Dentures *292*
- Direct Sequelae of Wearing Complete Dentures *292*
- Indirect Sequelae of Wearing Complete Dentures *303*
- General Precautions to Prevent and/or Control of Sequelae from Complete Dentures *305*

14. Relining and Rebasing in Complete Dentures **308**
- Relining *310*
- Rebasing *318*

15. Special Complete Denture **321**
- Conventional Complete Dentures with Mechanical Retentive Components *322*
- Single Complete Dentures *322*
- Immediate Dentures *328*
- Tooth-supported Overdentures *331*
- Cu-sil Denture *334*
- Implant-supported Overdentures *334*
- Obturators *334*

Section 2: Removable Partial Dentures

16. Introduction and Classification **339**
- Common Terminologies Used in Removable Partial Denture *340*
- Indications for Removable Partial Dentures *341*
- Classification of Partially Edentulous Arches *343*
- Steps in the Fabrication of a Removable Partial Denture *362*
- Parts of a Removable Partial Denture *365*

17. Diagnosis, Treatment Planning, and Mouth Preparation **368**
- Clinical Diagnosis *369*
- Clinical Evaluation of the Existing Teeth *369*
- Derived Diagnosis or Post-clinical Diagnosis *373*
- Treatment Planning *377*
- Preprosthetic Mouth Preparation *378*
- Common Problems Faced during Treatment Planning *379*
- Making the Primary Cast *383*

18. Removable Partial Denture Design **385**

18A. Surveying 386
- Surveying *386*

18B. Path of Insertion 400
- Determining the Path of Insertion and Guiding Planes *400*

18C. Major Connectors 406
- Major Connector *406*

18D. Minor Connector 420
- Minor Connectors *420*

18E. Rest and Rest Seats 425
- Rest and Rest Seats *425*

18F. Direct Retainers 432
- Direct Retainer *432*

18G. Attachments 448
- Internal Attachment *448*

18H. Indirect Retainers 455
- Indirect Retainers *455*

18I. Denture Base and Teeth 461
- Denture Base *461*

18J. Principles of a Removable Partial Denture Design *465*

- Principles of a Removable Partial Denture *465*
- Principles of Design/Philosophy of Design *477*
- Essentials of Design *480*
- Laboratory Design Procedure *481*

19. Prosthetic Mouth Preparation **489**

- Preparation of Retentive Undercuts *490*
- Guide Plane Preparation *494*
- Rest Seat Preparation *495*

20. Secondary Impression and Master Cast for RPD **500**

- Impression Making for Kennedy's Tooth Supported Partial Denture *502*
- Impression Making for Distal Extension Denture Bases *502*
- Dual Impression Procedures *504*
- Preparing the Master Cast *513*

21. Fabrication of a Removable Partial Denture **519**

- Framework Fabrication *520*
- Framework Try-In *532*
- Fabrication of the Temporary Denture Base and Occlusal Rims *532*
- Jaw Relation *533*
- Mounting the Casts *533*
- Denture Base Selection *533*
- Teeth Selection *534*
- Arranging the Artificial Teeth *536*
- Processing *538*
- Insertion *538*

22. Types of Removable Partial Dentures **543**

- Unilateral RPD *545*
- Implants Supported RPD *545*
- Removable Partial Overdenture *546*
- Guide Plane Removable Partial Denture *549*
- I-Bar Removable Partial Dentures *550*
- Swing-Lock Removable Partial Dentures *557*
- Temporary Partial Dentures *560*
- Immediate Partial Dentures *567*
- Spoon Dentures *568*
- Avery Dentures *569*
- Two-Part Dentures *569*
- Claspless Dentures *571*
- Disjunct Dentures *571*
- Tooth-Borne Nesbit Dentures *572*
- Sectional Denture Attachments *573*

23. Correction of Removable Partial Dentures **578**

- Relining *579*
- Rebasing of Removable Partial Dentures *581*
- Reconstruction of Removable Partial Dentures *582*
- Repair of Removable Partial Dentures *582*
- Glass Fiber Reinforcement Repair in Acrylic Removable Dentures *583*

Section 3: Fixed Partial Dentures

24. Introduction to Fixed Partial Dentures **591**

- Common Terms Used in Fixed Prosthodontics *592*
- Indications for FPD *593*

- Contraindications for FPD *593*
- Diagnosis and Treatment Planning *594*
- Classification of FPD *599*
- Smile Designing *609*

25. Parts of a Fixed Partial Denture **614**
- Retainers *615*
- Pontics *618*
- Special Pontics *630*
- Connectors *632*

26. Design of a Fixed Partial Denture **636**
- Design Considerations for Individual Conditions *638*
- Material Selection *638*
- Biomechanical Considerations *639*
- Abutment Selection *640*
- Special Cases *644*
- Condition of the Residual Ridge *645*
- Occlusion with the Opposing Teeth *645*

27. Occlusion and Full-Mouth Rehabilitation **647**
- Gnathology *649*
- Gnathological Instruments *673*
- Occlusal Determinants for Fixed Prosthodontics *701*
- Concepts of Occlusion for Fixed Restoration *706*
- Full-mouth Rehabilitation *710*

28. Types of Abutments **726**
- Healthy/Ideal Abutments *727*
- Cantilever Abutments *727*
- Pier Abutments *727*
- Tilted Abutments *728*
- Extensively Damaged Abutments *730*
- Implant Abutments *737*

29. Tooth Preparation **743**
- Principles of Tooth Preparation *744*
- Preparations for Full Veneer Crowns *753*
- Preparations for Partial Veneer Crowns *764*

30. Types of Fixed Partial Dentures **781**
- Based on Design *782*
- Based on Materials *785*
- Based on Length *786*
- Based on Duration of Use *787*
- Fixed Partial Denture Splints *787*
- Fiber-Reinforced Composite Resin Bridges *789*
- Resin-bonded Fixed Partial Dentures *791*
- Laminate Veneers *798*

31. Impression-Making in Fixed Partial Dentures **808**
- Fluid Control and Soft Tissue Management *809*
- Impression-Making for Fixed Partial Dentures *821*
- Other Equipment for FPD Impressions *825*

32. Temporization or Provisional Restoration **827**
- Ideal Requirements of Provisional Restorations *828*
- Types of Provisional Restorations *829*

- Limitations of Provisional Restorations *832*
- Recent Advances and New Materials *833*

33. Lab Procedures Involved in the Fabrication of FPD **840**
- Dies and Working Casts *841*
- Wax Pattern Fabrication *844*
- Casting *851*
- Soldering *863*
- Welding *865*
- Recent Advancements Fabrication in Metal Framework *868*
- Ceramic/Acrylic Veneering *870*

34. Cementation of Fixed Partial Dentures **878**
- Finishing and Polishing *879*
- Luting Agents *879*
- Try-In *883*
- Cementation *886*

Section 4: Maxillofacial Prosthetics

35. History and Materials in Maxillofacial Prosthetics **895**
- Materials in Maxillofacial Prosthetics *899*
- Acrylic Resin *899*
- Acrylic Copolymers *899*
- Polyvinyl Chloride and Copolymers *899*
- Chlorinated Polyethylene *900*
- Polyurethane Elastomers *900*
- Silicones *901*
- Polyphosphazenes *903*
- Color-Matching *903*
- Extrinsic and Intrinsic Methods of Coloring *904*
- Adhesives in Maxillofacial Prosthesis *904*

36. Types of Maxillofacial Defects **907**
- Maxillary Defects *908*
- Mandibular Defects *917*
- Velopharyngeal Defects *920*
- Extraoral Defects *920*
- Traumatic Defects *921*

37. Types of Maxillofacial Prosthesis **924**
- Complete Dentures in Maxillofacial Prosthetics *925*
- Removable Partial Dentures in Maxillofacial Prosthetics *928*
- Fixed Partial Dentures in Maxillofacial Prosthetics *932*
- Implants *932*
- Obturators and Velopharyngeal Prosthesis *932*
- Extraoral Prosthesis *934*
- Treatment Prosthesis *935*

38. Cleft Lip and Palate **939**
- Incidence *940*
- Embryological Background *940*
- Etiology *941*
- Method of Transmission *941*

- Classification *941*
- Diagnosis *945*
- Treatment Planning *945*
- Management *947*

Section 5: Implant Dentistry

39. Introduction and History of Dental Implantology **959**
- History *960*
- Indications and Contraindications *961*
- Need for Dental Implants *962*
- Leading Implant Manufacturers *963*

40. Classification and Types of Dental and Craniofacial Implants **977**
- Classification by Design *978*
- Classification by Material Used *984*
- Classification of Implants based on Biocompatibility *989*
- Classification of Implant Surfaces *990*

41. Osseointegration **994**
- Definition *995*
- History *995*
- Why Titanium? *997*
- Fibro-osseous Retention or Fibrous Integration *997*
- Osseointegration *998*
- Structure of Osseointegration *998*
- Stages of Osseointegration *998*
- Methods to Determine Osseointegration *1000*
- Factors Affecting Osseointegration *1003*

42. Endosseous Implant Design **1012**
- Implant Macrogeometry *1013*
- Implant Microgeometry *1023*
- Dental Implant Biomechanics *1028*

43. Implant Surgical Components **1055**
- Diagnostic Instruments *1056*
- Instruments for Incision, Flap Reflection and Site Preparation *1057*
- Instruments for Osteotomy and Implant Placement *1060*
- Instruments for Grafting *1065*

44. Implant Prosthetic Components **1079**
- Transmucosal Extensions *1080*
- Implant Abutment *1080*
- Permanent Abutments *1084*
- Retaining Screws *1090*
- Impression Copings *1092*
- Laboratory Analogs *1093*

45. Diagnosis and Treatment Planning **1095**
- History *1096*
- Clinical Examination of the Implant Site *1097*
- Radiographic Examination *1108*
- Surgical Stents *1115*
- Immediate Implants *1120*
- Implant Prosthesis *1126*

46. Surgical Aspects of Implant Dentistry **1133**
- Sterilization Requirements *1134*
- Grafting in Implant Dentistry *1135*
- Implant Osteotomy *1153*

47. Prosthetic Management of Dental Implants **1163**
- Loading Protocols *1164*
- Soft Tissue Management *1171*
- Impression-Making *1174*
- Dies and Soft Tissue Models *1178*
- Verification Jigs *1179*
- Jaw Relation Articulation and Templates *1180*
- Occlusion *1181*
- Wax-up and Casting *1185*
- Trial *1188*
- Insertion *1190*
- Prosthetic Management of Single Implant Restorations *1191*
- Prosthetic Management of Implant-supported Bridges *1194*
- Prosthetic Management of Implant-supported Overdentures *1200*
- Prosthetic Management of Implant-supported Hybrid Dentures *1201*
- Prosthetic Management of Implant-supported Full Arch Fixed Prosthesis *1202*

48. Implant Maintenance **1207**
- Patient Self-Care *1208*
- Clinical Maintenance *1210*
- Clinical Maintenance Protocols *1214*
- Complications and Failures in Dental Implants *1216*
- Peri-Implantitis *1219*

Section 6: Temporomandibular Joint Disorders

49. Temporomandibular Disorders **1235**
- Introduction, Etiology and Pathogenesis of TMD *1236*
- Diagnosis *1240*
- Management of TMD *1243*

Section 7: Dental Materials

50. Miscellaneous **1263**

50A. Dental Materials 1264

50B. Color Science 1318
- Color Composition *1318*
- Color Perception *1321*
- Color Science in Dentistry *1325*
- Communication *1328*

50C. Attachments in RPDs 1332

50D. Lasers in Prosthodontics 1350

50E. Magnets 1360
- Magnets for Denture Retention *1360*

Index *1363*