

<i>Foreword by Dr (Prof) Vivek Govila</i>	3
<i>Foreword by Prof (Dr) Aseem Prakash Tikku</i>	4
<i>Foreword by Dr Gaurav Singh</i>	5
<i>Preface</i>	7
<i>List of Illustrated Plates</i>	12
<i>How to Use this Book</i>	13
<i>How the Atlas is Organised</i>	14

PART ONE—CONVENTIONAL MICROBIOLOGY

15

Unit I—General Microbiology

1. Introduction, History, Scope, Aim & Objectives	16
2. Morphology & Physiology of Bacteria	18
3. Sterilization & Disinfection	22
4. Culture Media & Culture Techniques	25
5. Normal Microbial Flora of the Oral Cavity	28
6. Oral Microbiology: Dental Plaque, Caries & Periodontal Disease	30
7. Bacterial Genetics & Drug Resistance	41

Unit II—Immunology

8. Infection	44
9. Immunity & the Immune System	46
10. Antigen	48
11. Antibodies (Immunoglobulins)	50
12. Antigen–Antibody Reactions (Serology)	52
13. Complement System & the Immune Response	54
14. Hypersensitivity Reactions	56
15. <i>Autoimmune & Immunodeficiency Disorders</i>	58
<i>Graft-vs-Host Reaction & Organ Transplantation</i>	60
<i>Tumour Immunology</i>	62

Unit III—Systematic Bacteriology

16. Staphylococcus	64
17. Streptococcus & Cariogenic Streptococci	66
18. Pneumococcus (<i>Streptococcus pneumoniae</i>)	69
19. Neisseria—Meningococcus & Gonococcus	71
20. <i>Corynebacterium diphtheriae</i>	73
21. <i>Mycobacterium tuberculosis</i>	75
22. <i>M. leprae</i> & Atypical (Non-Tuberculous) <i>Mycobacteria</i>	77
23. <i>Clostridium perfringens</i> (<i>welchii</i>)—Gas Gangrene	79
24. <i>Clostridium tetani</i> —Tetanus	81

25. Non-Sporing Anaerobes	83
26. Spirochaetes	85
27. Nosocomial Infection (Healthcare-Associated) & Cross-Infection Control	87
28. Enterobacteriaceae	89
29. <i>Vibrio cholerae</i>	91
30. Actinomycetes (<i>Actinomyces</i> & <i>Nocardia</i>)	93
31. Biosafety & Biomedical Waste Management	95

Unit IV—Virology

32. Introduction & General Properties of Viruses	97
33. Herpesviruses	99
34. Hepatitis Viruses—HBV, HCV, HDV	101
35. Human Immunodeficiency Virus (HIV)	103
36. Mumps, Measles & Rubella	105
37. Laboratory Diagnosis of Viral Infections & Immunoprophylaxis	107

Unit V—Mycology

38. Introduction to Mycology	109
39. Candidiasis (Candidosis)	111
40. Systemic Mycoses with Oral Lesions— <i>Cryptococcus</i> , <i>Histoplasma</i> & Others	113

Unit VI—Parasitology

41. Introduction to Parasitology & <i>Entamoeba histolytica</i>	115
42. Malaria	117
43. <i>Giardia</i> , <i>Trichomonas</i> & Oral Protozoa	119
44. Helminths—Round Worm, Hook Worm, Tape Worm & <i>Filaria</i>	121

PART TWO—CLINICAL DENTAL MICROBIOLOGY

123

Clinically Oriented Chapters for Dental Practice

1. Oral Ulcers—Classification and Clinical Approach	124
2. Non-Healing Ulcers of the Mouth	126
3. Autoimmune Diseases of the Mouth	128
4. White Patches (White Lesions) of the Oral Mucosa	130
5. Infectious Diseases of the Oral Cavity	131
6. Oral Presentations of HIV/AIDS	133
7. Oral Presentations of Diabetes Mellitus	134
8. Oral Tuberculosis	135
9. Normal Oral Microbial Flora and Oral Hygiene	137
10. Pre- and Post-Exposure Prophylaxis for the Dental Surgeon	139
11. Sterilisation and Disinfection of the Dental Clinic	142
12. Sterilisation and Disinfection of Dental Instruments	144
13. Anaerobic Infections of the Oral Cavity	146
<i>Rapid Revision—Cross-Topic Summary</i>	148
<i>References for Further Reading</i>	149

PART THREE—QUESTIONS & ANSWERS**150****Examination Question Bank**

<i>How to Use This Question Bank</i>	151
<i>Section E—Viva-Voce Rapid Fire</i>	174
<i>Quick Revision—One-Page Summary Table</i>	175
<i>References for Further Reading</i>	176

PART FOUR—PRACTICAL MICROBIOLOGY**177****Unit VII—Practical Microbiology**

45. Practical I —Microscopy	178
46. Practical II —Staining Techniques	180
47. Practical III —Culture Media, Culture Methods & Specimen Collection	182

Unit VIII: Rapid Revision

48. Rapid Revision—High-Yield Tables & Mnemonics	213
--	-----

PART FIVE—ILLUSTRATED DENTAL ATLAS**215****Colour Plates of Oral and Systemic Infections**

<i>Plates 1–20—Illustrated Charts of Oral Disease</i>	216
<i>Glossary of Microbiological & Dental Terms (A–Z)</i>	236
<i>Index (A–Z)</i>	243

List of Illustrated Plates

The twenty colour plates of Part Five occupy pages 187 to 206, one plate per page.

1. Oral Ulcers	216
2. Oral Thrush (Oral Candidiasis)	217
3. Tubercular Oral Ulcer (Oral Tuberculosis)	218
4. Scarlet Fever—Mouth Presentation	219
5. Lock Jaw (Tetanus)	220
6. Diphtheria of the Mouth and Oral Actinomycosis	221
7. Gonorrhoea Presentations in Mouth	222
8. Syphilis—Oral Presentations	223
9. Leprosy—Mouth and Face Manifestations	224
10. Botryomycosis—Oral Presentations	225
11. Rhinoscleroma—Oral Manifestations	226
12. Pyostomatitis Vegetans	227
13. Mumps (Epidemic Parotitis)—Oral Presentation	228
14. Herpangina—Oral Presentation	229
15. Measles (Rubeola)—Oral Presentation	230
16. Types of Candidiasis	231
17. Infectious Mononucleosis (IM)	232
18. Hand, Foot & Mouth Disease (HFMD)	233
19. Oral Manifestations of HIV/AIDS	234
20. Kaposi's Sarcoma—Hard Palate (Oral)	235