

# Contents

Preface 6

Acknowledgements 7

## Section 1: Principles of ophthalmology

1. Introduction: what is ophthalmology? 8
2. Medical student aims 10
3. Social and occupational aspects of vision 12

## Section 2: Ophthalmic history and examination

4. Taking the history and recording the findings 14
5. Visual acuity in adults 16
6. Examination of visual fields 18
7. Other visual functions 20

## Section 3: Correction of refractive errors

8. Basic optics and refraction 22
9. Glasses, contact lenses and low-vision aids 24

## Section 4: Basic eye examination

10. External eye and anterior segment 26
11. Posterior segment and retina 28
12. Use of eye drops 30

## Section 5: Acute ophthalmology

13. The red eye 32
14. More on the red eye 34
15. Ophthalmic trauma principles and management of chemical injuries 36
16. Specific features of blunt and sharp injuries 38
17. Sudden painful loss of vision in a non-inflamed eye 40
18. Sudden painless loss of vision 42

## Section 6: Gradual loss of vision

19. Gradual loss of vision 44

## Section 7: Sub-specialty — Paediatric ophthalmology

20. Visual acuity in children 46
21. Strabismus (squints) 48
22. Neonates 50
23. Infants and older children 52

## Section 8: Sub-specialty — Eyelid, lacrimal and orbit

24. Common eyelid lumps 54

25. Common eyelid malpositions 56
26. Lacrimal (tearing) 58
27. Basic orbital assessment 60
28. Orbital and thyroid eye disease 62

## Section 9: Sub-specialty — External eye disease

29. Common conditions affecting the external eye 64
30. Common conditions affecting the cornea 66
31. Therapeutic contact lenses 68
32. Corneal and laser photorefractive surgery 70

## Section 10: Sub-specialty — Corneal, refractive and cataract surgery

33. Cataract assessment 72
34. Cataract surgery 74
35. Cataract surgery postoperative care 76

## Section 11: Sub-specialty — Glaucoma

36. Glaucoma—the basics 78
37. Detecting glaucoma 80
38. Medical and surgical treatment of glaucoma 82

## Section 12: Sub-specialty — Vitreoretinal and medical retina

39. Retinal detachment 84
40. Retinal and choroidal anatomy and imaging 86
41. Inherited retinal dystrophies and age-related macular degeneration 88
42. Diabetic retinopathy classification and typical lesions 90
43. Diabetic retinopathy treatment 92
44. Retinal vein occlusion 94
45. Retinal artery obstruction 96
46. HIV infection and AIDS 98

## Section 13: Sub-specialty — Neuro-ophthalmology

47. Pupil abnormalities 100
48. Optic nerve disease 102
49. Cranial nerve palsies and eye movement disorders 104
50. Visual fields defects 106

Appendix: Red eye 108

Index 109