Contents

1. Introduction **1**
Anesthesia 2

2. Anesthesiologist **7**
Learning Anesthesiology 7
Functions of the Anesthesiologist 7
Surgeon-Anesthesiologist Relations 11
Operating Theater Suite and Theater Discipline 13
Operating Department Manager 16

3. Surgical Team **19**
Members of Surgical Team 19
Job Descriptions of Anesthetic Technician 23
Unskilled Personnel Working Inside the Operating Room 25
Coordinator of the Team 27

4. Safe Practice of Anesthesia **32**
Ten Golden Rules of Anesthesia 33
Indian Society of Anesthesiologists 34
Safety in Anesthesia 36
Accidents during Anesthesia 37
Anesthetic Records 40
Monitoring during Anesthesia 43
Monitoring the Anesthetic Machine 45
The Cardiovascular System 45

5. Preanesthetic Assessment **48**
The Purpose of Preoperative Visit 49
Guidelines for Preanesthetic Visit 49
Definition 51
History Taking 51
Physical Examination 52
Basic Laboratory Investigations 52
Grading of Risk (American Society of Anesthesiologists) 54
Fit for Anesthetic 55
Informed Consent for Anesthesia and Surgery 57
Preoperative Starvation 60
Canceling Cases 61
Choice of Anesthesia 62

6. Preanesthetic Medications (Premedication) **65**
Definition 65
Preanesthetic Medication Drugs (Premedication Drugs) 66
Effects of Premedication 71

7. Clinical Anesthesia: Balanced Anesthesia **73**
The Purpose of Anesthesia 73
Guedel's Classification of Anesthesia 73
The Triad of Anesthesia 75
Definition of Anesthesia 76

Balanced Anesthesia 77
Modern Anesthesia 78
Recovery from Anesthesia 83
Classification of Anesthesia 86

8. The Operating Department 87
Operating Department, Operating Suite, Operating Theater 89
Access Zones 89
Patient Transport 91
Design 93
Construction 94
Lighting 94
Pendant Services 99
Ventilation 99
Storage 102

9. Theater Asepsis and Equipments Sterilization 104
Operating Theater Environment and Asepsis 104
History 105
Definitions 107
Theater Disinfection Schedule 107
Ultraviolet Rays 110
Ultraviolet Rays Air Cleaning System 110
Sterilization of Equipments 113
Cleaning and Sterilization 114
Gamma Rays 128

10. Operating Table and Positions for Surgery 132
Positions for Surgery 134
Supine or Dorsal Recumbent Position 135
Trendelenburg Position 136
Gallbladder and Liver Position 136
Lateral Position of Extension (Kidney Position) 137
Lithotomy Position 139
Position for Abdominoperineal Resection of Rectum 140
Supporting Pads for Positioning 143

11. Assessment of Blood Loss and Volume Replacement 144
Facts about Blood Transfusion 145
Assessment of Blood Loss during Surgery 145
Recommendations from Various Authorities Regarding Transfusion 147
Role of Colloid Solutions in Blood Volume Replacement 147
Commonly Used IV Fluids, their Composition and Indications 149

12. Vital Organ Function and Anesthesia 155
Anesthesia and Liver 155
Anesthesia and Kidney 160
Anesthesia and Brain 166
Anesthesia and Heart 170

13. Recovery Room: Postanesthesia Care Unit (PACU) 178
Postanesthesia Care 178
Recovery Room 179
The Transport to Recovery Room 180
The Purpose of Recovery Room 181
Recovery Criteria 188

Clinical Assessment of Adequacy of Reversal of NMB 189
Guidelines for Postanesthetic Care 192

14. Local Anesthetic Drugs and Regional Anesthesia 198
Definition of Regional Anesthesia 198
Pharmacology of Local Anesthetics 199
Structure of Pharmacological Relationship 199
Mechanism of Action 200
Xylocaine 200
Bupivacaine 201
Toxic Reactions of Local Anesthetics 201
Techniques of Regional Anesthesia 203

15. Guidelines for Emergency Abdominal Surgeries 221
A Clinical Approach 224

16. Postoperative Nausea and Vomiting 225
Common Recovery Room Problems 225
Factors that Affect the Incidence of PONV 228
Guiding Principles 235

Index 237