

Contents

<i>Preface</i>	<i>ix</i>
<i>Acknowledgement</i>	<i>xi</i>
Section 7: Pharmacology	1
<i>Dr. Azam Danish, Dr. Amit Jain</i>	
7.1 Basic of Pharmacology	3
7.2 Volume of Distribution (V_d)	5
7.3 Intravenous Anaesthesia	10
7.4 Propofol- IV Induction Agents	11
7.5 Thiopentone	14
7.6 Ketamine	16
7.7 Etomidate	18
7.8 Inhalation Agents	20
7.9 Anticholinergic Drugs	25
7.10 Atropine	26
7.11 Glycopyrronium Bromide	28
7.12 Opioids	29
7.13 Opioid Antagonist	38
7.14 Muscle Relaxants	39
7.15 Non-Depolarizing (Competitive) Neuromuscular Blockers	41
7.16 Depolarizing Neuromuscular Blockers	42
7.17 Choline Esterase Enzyme Inhibitors (Reversal of Neuromuscular Blockers)	43
7.18 Sugammadex	45
7.19 Anti Emetic	46
7.20 PONV	49
7.21 Local Anaesthesia	53
7.22 Benzodiazepines	59
7.23 Dopamine Agonist "Levodopa"	60
7.24 Antiepileptic Drug	61
7.25 Insulin	63

7.26	Corticosteroids	63
7.27	Drug Therapy of Asthma.....	64
7.28	Anti-Inflammatory.....	65
7.29	Non-Steroidal Anti-Inflammatory Drugs (NSAIDs).....	66
7.30	Paracetamol.....	67
7.31	(Frusemide – Bumetanide –Torsemide).....	68
7.32	Mannitol.....	70
7.33	Vasodilator Drugs.....	71
7.34	Positive Inotropic Drugs	72
7.35	Indirect Thrombin Inhibitors.....	79
7.36	Direct Thrombin Inhibitor.....	80

Section 8: Instruments 91

Dr. Amit Jain, Dr. Meera Pandey

8.1	Basic Physics	93
8.2	Venturi Principle	95
8.3	Anaesthesia Machine	96
8.4	Safety Features of Anaesthesia Machine	98
8.5	Prevent Delivery of Hypoxic Mixture	99
8.6	Flowmeters.....	102
8.7	Cylinders.....	105
8.8	Scavenging.....	108
8.9	The Anaesthetic Machine Check.....	108
8.10	Guidelines for Developing Institution-Specific Checkout Procedures Prior to Anaesthesia Delivery	109
8.11	IV SET	113
8.12	Measured Volume Administration Set (Burette Set).....	114
8.13	Blood Administration Set (B.T. Set)	114
8.14	IV Cannula/IV Cath	115
8.15	Facemask.....	116
8.15	Catheter Mount	117
8.16	Magill Forceps	117

8.17	Sponge Holding Forceps	118
8.18	Oropharyngeal Airway	118
8.19	Nasopharyngeal Airway	119
8.20	Bougies	120
8.21	Stylets	120
8.22	Airway Exchange Catheter	120
8.23	Laryngoscopes	121
8.24	Glidescope	122
8.25	Cuffed Oral Endotracheal Tube (COETT)	122
8.26	RAE (Ring, Adair and Elwyn) Tube	124
8.27	Tracheostomy Tubes	125
8.28	Bag Valve Mask/AMBU Bag	126
8.29	Resuscitation Masks	128
8.30	Non-Rebreathing Valves	129
8.31	Reservoir Bag	132
8.32	Vaporiser	133
8.33	Temperature Compensation	137
8.34	(1988) ASTM Machine Standards for Vaporisers	138
8.35	Supraglottic Devices	139
8.36	LMA	140
8.37	Soda Lime	145
8.38	Breathing System	148
8.39	Lung Isolation Devices	153
Section 9: Peri-Operative		171
<i>Dr. Sonali Tiphathi, Dr. Puja Singh</i>		
9.1	Donning and Doffing of PPE	173
9.2	Oxygen Therapy	174
9.3	Hyperbaric O ₂ Therapy (HBOT)	187
9.4	Complications of Oxygen Therapy	188
9.5	Management of Shock	190
9.6	CPR	191

9.7 Defibrillators	198
9.8 Delayed Recovery	198
9.9 Recovery Room	201
9.10 Modes of Ventilator.....	204
9.11 Weaning from Ventilator	205
9.12 Increased Peak Airway Pressure	206
9.13 AMC and CMC	206
9.14 Intra-OP Modification of Hemodynamic Factors	207
9.15 Pain Clinic.....	208
9.16 Acute Pain Services.....	209
9.17 Patient Controlled Analgesia (PCA)	210
9.18 Patient Controlled Epidural Analgesia (PCEA)	211
9.19 Epidural Catheter Removal.....	212
9.20 Role of Anaesthesiologist in ICU	212
9.21 ICU Design	213
9.22 Sepsis	216
9.23 Ryles Tube/Nasogastric Feeding.....	217
9.24 Care of Patient in ICU.....	219
9.25 Care of Patient on Ventilator.....	221
9.26 Pressure Sore/Bed Sore.....	222
9.27 Deep Venous Thrombosis	224
9.28 Prevention of Cross Infection	225
9.29 Blood Transfusion.....	227
9.30 Organophosphorus Poisoning	233
9.32 Tourniquets in Anaesthesia	236

Section 10: Miscellaneous..... 239

Dr. Amit Jain, Dr. Puja Singh

10.1 Inflammation	241
10.2 Immunity	242
10.3 Anaphylaxis.....	243
10.4 Hypoxia.....	244

10.5 Burns	245
10.6 Choking.....	247
10.7 Thyroid Storm.....	248
10.8 Non-Operating Room Anaesthesia (NORA)	250
10.9 Fire and Electric Hazards In OT	251
10.10 Bedside Pulmonary Function Test	253
10.11 Colour Coding.....	255
10.12 Table and Charts.....	259
10.13 Blood Supply of Heart	261
10.14 Brain.....	262
10.15 Sling and Splints	263
10.16 Sterilising Solutions.....	264
10.17 Referred Pain	265
10.18 Fetal Circulation.....	267
10.19 Functions of Sympathetic and Parasympathetic Nervous System	273
10.20 Smoking	274
10.21 Block	284

Section 11: Previous Question Papers 291

Dr. Sonali Tiphathi, Satish Singh

Section 12: Colour Atlas 309

Dr. Meera Pandey, Dr. Niharika Jain