Contents

1.1 Introduction 2; 1.2 History of First Aid 2; 1.3 Definition 3;

Aid 4; 1.7 Philosophy of First Aid 4; 1.8 Scope of First Aid 4;

1.4 Meaning of First Aid 3; 1.5 Aims of First Aid 3; 1.6 Objectives of First

1.9 Golden Rules of First Aid 4; 1.10 Types of First Aid 5; 1.11 Principles

1

1. Introduction to First Aid

	Aider 6; 1.14 Responsibilities of a First Aider 7; 1.15 Limitations of the First Aider 7; 1.16 Safety Measures of the First Aider 8; 1.17 Preparing for Emergencies 8; 1.18 Goals of Emergency Medical Treatment 9; 1.19 Principles Applied in Emergency Management 9; 1.20 History Collection from Patient/Relatives 9; 1.21 Ethical and Legal Consideration in First Aid 10; 1.22 First Aid Code of Practice 13; 1.23 First Aid Kit 14; 1.24 Solutions Used in First Aid 14; 1.25 Reporting, Record Keeping and Documenting 15	
2.	First Aid Assessment 2.1 Introduction 18; 2.2 First Aid Assessment Principles 18; 2.3 Emergency Approachment 19; 2.4 Moving the Injured Victim 21; 2.5 First Aid Assessment Techniques 25; 2.6 Skills Required for the First Aider 26; 2.7 Casualty Assessment 27; 2.8 Methods of Victim Assessment 29; 2.9 Diagnosing of Victim 29; 2.10 Vital Signs 30; 2.11 Blood Pressure 35; 2.12 General Head-to-Toe Examination 37	17
3.	Bandaging 3.1 Introduction 41; 3.2 Meaning of Bandage 41; 3.3 Definition 42; 3.4 Indications 42; 3.5 Purpose of Bandaging 43; 3.6 Functions of Bandages 43; 3.7 General Principles 43; 3.8 Types of Bandages 44; 3.9 Bandaging Materials 45; 3.10 Assessing before Applying Bandage 46; 3.11 Bandaging Procedure 46; 3.12 Special Bandages 47; 3.13 General Rules for Applying Bandages 48; 3.14 Applying Roller Bandage 48; 3.15 Methods of Application 50; 3.16 Circular Turn 51; 3.17 Spiral Turn 51; 3.18 Spiral Reverse Turns 51; 3.19 Figure-of-Eight Turns 52; 3.20 Spica Bandage 52; 3.21 Hand Bandage 52; 3.22 Wrist, Forearm, and Upper Arm Bandage 53; 3.23 The Upper Arm 53; 3.24 Spica of Shoulder Bandage 54; 3.25 Bandages for the Foot, Ankle and Legs 54; 3.26 Bandage for the Knee 55; 3.27 Spica of Hip Bandage 55; 3.28 Head and Other Bandage 56; 3.29 Ear Bandage 56; 3.30 Eye Bandage 57; 3.31 Breast Bandages 57; 3.32 Stump Bandage 58; 3.33 Many Tail Bandages 58; 3.34 T-Bandages 59	40
4.	Slings and Binders 4.1 Introduction 61; 4.2 Uses of Triangular Bandage 62; 4.3 Application of Triangular Bandage in Bandaging Other Parts of the Body 64; 4.4 Slings 66; 4.5 Methods of Sling 67; 4.6 Application of Sling Procedure 68; 4.7 Binders 70;	61

4.8 Application Techniques of Binder 70; 4.9 Abdominal Binders 71;

4.10 Applying Abdominal, T- and Breast Binders 72

75

5.1 Introduction 76; 5.2 Definition of Wound 77; 5.3 Meaning of Wounds 77; 5.4 Classifications of Wound 77; 5.5 Principles of First Aid in Wounds 79; 5.6 Complications of Wounds 79; 5.7 Principles in Wound Care 80; 5.8 First Aid Measures in Minor Wounds 80; 5.9 First Aid Measures in Major Wounds 81; 5.10 Prevention of Wounds Infection 83; 5.11 Wound Care 84; 5.12 Sterile Dressing 86; 5.13 Hemorrhage 86; 5.14 Classifications of Hemorrhage 87; 5.15 Assessment of Hemorrhage and Bleeding Wounds 89; 5.16 Classification of Blood Loss 90; 5.17 Control of Bleeding by Pressure Dressing 90; 5.18 Internal Hemorrhage 94; 5.19 First Aid Measures for Bleeding from Special Parts 95

6. Basic Life Support

103

6.1 Introduction 103; 6.2 Meaning of BLS 104; 6.3 Definition 104; 6.4 Objectives and Goals of BLS 105; 6.5 Steps of BLS 106; 6.6 Chain of Survival 109; 6.7 Mouth-to-Mouth Method 110; 6.8 Mouth-to-Nose Method 111; 6.9 Mouth-to-Stoma Method 111; 6.10 Mouth-to-Barrier Device 112; 6.11 Check for a Pulse 112; 6.12 Perform External Chest Compressions 113; 6.13 Two-Rescuer CPR 115; 6.14 Switching Functions 116; 6.15 Complications of CPR 116; 6.16 Infant BLS 117; 6.17 Nurses' Role in BLS 121

7. Injuries/Trauma

123

7.1 Introduction 125; 7.2 Definition 125; 7.3 ABCDE of Trauma 125; 7.4 Types of Traumatic Experiences 127; 7.5 Assessment of Injury 128; 7.6 Trauma Scoring Systems 129; 7.7 Multidisciplinary Trauma Team 130; 7.8 Levels of Care Provided in Trauma Center 130; 7.9 Types of Physical Injuries 132; 7.10 Skeletal Injuries 132; 7.11 Strain 134; 7.12 Sprain 135; 7.13 Dislocation 137; 7.14 Chest Injuries 138; 7.15 Rib Fracture 140; 7.16 Flail Chest 141; 7.17 Intra-abdominal Injuries 142; 7.18 Blunt Abdominal Trauma 146; 7.19 Crush Injuries 148; 7.20 Multiple Injuries 149; 7.21 Head Injury 151; 7.22 Spinal Cord Injury 154; 7.23 Road Accidents 159; 7.24 Post-traumatic Stress Disorder 160; 7.25 Trauma Case Manager Interventions 163; 7.26 Role of Trauma Nurse 163; 7.27 Emergency Nurse Practitioner (ENP) 164

8. Shock 165

8.1 Introduction 165; 8.2 Definition 166; 8.3 History of Shock 166; 8.4 Effects of Shock 166; 8.5 Stages of Shock 166; 8.6 Causes of Shock 167; 8.7 Progress of Shock 167; 8.8 Types of Shock 167; 8.9 Factors Influencing the Degree of Shock 168; 8.10 Signs and Symptoms of Shock 169; 8.11 Pathology of Shock 170; 8.12 Organs Involvement in Shock 170; 8.13 Diagnostic Approach and Evaluation 172; 8.14 Complications of Shock 172; 8.15 Assessment of Shock 173; 8.16 First Aid in Shock 174; 8.17 Hypovolemic Shock 175; 8.18 Anaphylaxis 177; 8.19 Cardiogenic Shock 179; 8.20 Neurogenic Shock 181; 8.21 Septic Shock 181

9. Fracture 185

9.1 Introduction 187; 9.2 Definition 187; 9.3 Causes of Fracture 187; 9.4 Types of Fracture 187; 9.5 Signs and Symptoms of Fracture 190; 9.6 Complications of Bone Fractures 191; 9.7 Principles of Fracture Management 191; 9.8 First Aid Treatment of Fractures 191; 9.9 Emergency Management 192; 9.10 First Aid

Measures in Orthotrauma 193; 9.11 Immobilization of the Fractured Part 194; 9.12 Facial Fractures 195; 9.13 Cheekbone and Nose Fractures 197; 9.14 Collarbone Fracture 197; 9.15 Upper Arm Fracture 198; 9.16 Elbow Fracture 199; 9.17 Fracture of the Forearm and Wrist 200; 9.18 Fractures of the Hand and Fingers 200; 9.19 Fracture of the Rib Cage 201; 9.20 Flail Chest Injuries 202; 9.21 Fracture of Backbone/Spine 203; 9.22 Fracture of Pelvis 206; 9.23 Fracture of Hip and Thigh 206; 9.24 Fracture of the Lower Leg 208; 9.25 Splints 209; 9.26 Plaster Casts and Application 211; 9.27 Traction 214; 9.28 Methods of Lifting and Transfer the Injured 217; 9.29 Nurses' Role in Fracture First Aid 218; 9.30 Management of Complications 219

10. Burns and First Aid Measures

221

10.1 Introduction 223; 10.2 Definition 223; 10.3 Burns Classification 223; 10.4 Causes of Burns and Scalds 226; 10.5 Characteristics of Burn Injury 227; 10.6 Complications of Burns 228; 10.7 Preventing All Degrees of Burns 229; 10.8 First Aid Management of Burns 229; 10.9 Wound Care in Burns 231; 10.10 Chemical Burns 232; 10.11 Fires 233; 10.12 Electrical Burns 234; 10.13 Preventive Measures of Electrical Burns 236; 10.14 Lightning and its Protecting and Preventive Measures 236

11. Poisoning

238

11.1 Introduction 240; 11.2 Definitions 240; 11.3 Goals Poison
Management 240; 11.4 Concept of Poisoning 240; 11.5 Initial Evaluation of
Patient with Poisoning 243; 11.6 Diagnosis of Poisoning 245; 11.7 Physical
Examination 245; 11.8 Clinical Laboratory Tests 245; 11.9 Special Procedures
Performed for Patients with Poisoning 246; 11.10 Swallowed Poisons 249;
11.11 Corrosive Poisons 250; 11.12 Noncorrosive Poisons 252; 11.13 Inhaled
Poisons 253; 11.14 Injected Poisons 256; 11.15 Food Poisoning 257;
11.16 Household Poisons 260; 11.17 Drug Poisoning 261; 11.18 Alcohol
Poisoning 262; 11.19 Industrial Poisons 263; 11.20 Common Indian Plant
Poisoning 264; 11.21 Drugs 267; 11.22 Metal Poisoning 267; 11.23 Organic
Chemical Poisoning 267; 11.24 Alcohol Poisoning 268

12. Bites and Stings

270

12.1 Introduction 271; 12.2 Dog Bite 272; 12.3 Snake Bites 274; 12.4 Insect Sting 276; 12.5 Cat Bite 277; 12.6 Rat Bite 278; 12.7 Bees and Wasp Bites 278; 12.8 Ticks and Mites Bites 279; 12.9 Spider Bite 280; 12.10 Leech Bite 281; 12.11 Fish Stings 282; 12.12 Blue-ringed Octopus 284

13. Foreign Bodies

285

13.1 Introduction 287; 13.2 Definition 287; 13.3 Symptoms of Foreign Body 287; 13.4 Foreign Body Retrieval 288; 13.5 Techniques Used for Foreign Body Retrieval 289; 13.6 Benefits and Risks of Foreign Body Retrieval 290; 13.7 Limitations of Foreign Body Detection and Removal 290; 13.8 Need of Emergency Care 290; 13.9 Foreign Bodies in the Respiratory Tract 291; 13.10 Foreign Bodies in the Alimentary Tract 293; 13.11 Foreign Bodies in the Eye 297; 13.12 Foreign Bodies in the Ear 299; 13.13 Foreign Bodies in the Nose 303; 13.14 Foreign Bodies in the Throat 305; 13.15 Foreign Bodies in the Skin 306

14. Common Emergencies and Resuscitation Measures

14.1 Introduction 311; 14.2 Meaning of Resuscitation 311; 14.3 Resuscitation Measures 311; 14.4 Choking 312; 14.5 Asphyxia 314; 14.6 Suffocation 317; 14.7 Hanging, Strangling and Throttling 318; 14.8 Drowning 319; 14.9 Smoke Inhalation 320; 14.10 Fires 321; 14.11 Shock 322; 14.12 Anaphylactic Reactions 325

15. Environmental Emergencies

15.1 Introduction 329; 15.2 Illness Caused by Heat Exposure 329; 15.3 Effects of Chronic Heat Exposure 330; 15.4 Heat-related Morbidity and Mortality 330; 15.5 Mechanism of Heat Loss 331; 15.6 Nonfreezing Cold Injuries 331; 15.7 Freezing Cold Injuries 332; 15.8 Heat Stroke 332; 15.9 Heat Exhaustion 335; 15.10 Heat Cramps 337; 15.11 Frostbite 338; 15.12 Accidental Hypothermia 339; 15.13 Sunburn 340; 15.14 Snow Blindness and Welder's Flash 341; 15.15 Trench Foot 342; 15.16 Chilblain 343; 15.17 Heat Rash 344

16. Minor Ailments 346

16.1 Introduction 347; 16.2 Headache 347; 16.3 Cough 349; 16.4 Dyspnea 351; 16.5 Hypoxia 354; 16.6 Cheyne-Stokes Respiration 356; 16.7 Cyanosis 357; 16.8 Hypercapnea 360; 16.9 Hypocapnea 361; 16.10 Respiratory Acidosis 363; 16.11 Respiratory Alkalosis 365; 16.12 Hypoglycemia 366; 16.13 Syncope 368; 16.14 Nurses' Roles in Minor Ailments 370

17. Handling and Transport of Injured

17.1 Introduction 373; 17.2 General Principles 373; 17.3 Lifting Casualty 373; 17.4 Carries for One First Aider 374; 17.5 Carries for Two First Aiders 375; 17.6 Lifting a Casualty in a Wheelchair 376; 17.7 Stretchers 377; 17.8 Preparing a Stretcher or Trolley Bed 379; 17.9 Loading a Stretcher 380; 17.10 Manual Lifts 381; 17.11 Loading a Casualty in the Recovery Position 382; 17.12 Loading an Ambulance 384

18. Sports Injuries

18.1 Introduction 387; 18.2 Definition 387; 18.3 Risk Factors that Causes Injury 387; 18.4 Causes of Sports Injuries 388; 18.5 Types of Sports Injuries 389; 18.6 Most Common Sports-related Injuries 389; 18.7 Symptoms of Sports Injuries 391; 18.8 Prevention of Sports Injuries 393; 18.9 Soft Tissue Injuries 394; 18.10 Managing Soft Tissue Injuries 395; 18.11 Immediate Treatment of Skin Injuries 396; 18.12 Hard Tissue Injuries 396; 18.13 Assessment of Injuries 397; 18.14 Knee Injuries 398; 18.15 Jumper's Knee 401; 18.16 First Aid for Sprains, Strains and Joint Injuries 402; 18.17 Osgood-Schlatter's Syndrome 402; 18.18 Bursitis 403; 18.19 Shin Pain 404; 18.20 Tennis Leg 405; 18.21 Achilles Tendinitis 407; 18.22 Retrocalcaneal Pain 408; 18.23 Plantar Fasciitis 409; 18.24 Blisters 410; 18.25 Athlete's Foot 411; 18.26 Frozen Shoulder 412; 18.27 Tennis Elbow 413; 18.28 Wrist Pain in Gymnasts 414; 18.29 Finger Tendon Injury 415; 18.30 Eye Injuries 416; 18.31 Dental Injury 417; 18.32 Ear Injury 419; 18.33 Under Water Diving Injury 420; 18.34 Maxillofacial Injuries 421; 18.35 Nasal Injuries 421; 18.36 Treatment Modalities of Sports Injuries 422; 18.37 Cold 424; 18.38 Ultrasonic 424; 18.39 Faradic Stimulation 424; 18.40 Manual Therapy 425

310

328

372

386

19. Disaster Nursing

427

19.1 Introduction 428; 19.2 Meaning of Disaster 429; 19.3 Definition 429; 19.4 Definitions of Disaster Nursing 429; 19.5 Goals of Disaster Nursing 430; 19.6 Principles of Disaster Nursing 430; 19.7 Health Effects of Disaster 430; 19.8 Factors Affecting Disaster 431; 19.9 Types of Disaster 431; 19.10 Levels of Disaster 432; 19.11 Natural Disaster 432; 19.12 Man-made Disaster 433; 19.13 Psychological Reaction to a Disaster 436; 19.14 Disaster Management of Health Sector in India 437; 19.15 Important Agencies in India 437; 19.16 Nurse's Role during Disaster 438; 19.17 Prevention, Mitigation and Preparedness Activities 438; 19.18 Relief Response 439; 19.19 Stages of Disaster Involvement 439; 19.20 Steps of Safety Measures during Disaster 440; 19.21 Role of Community Health Nurse in Disaster Management 441; 19.22 Disaster Response 442; 19.23 Disaster Recovery 442; 19.24 Disaster Management 443; 19.25 International Agencies in Disaster 444; 19.26 Impact of Disaster on Community 445; 19.27 Hospital Disaster Manual 445; 19.28 Disaster Plan 447; 19.29 Management of Mass Casualties 448; 19.30 Role of Nursing in Disaster 449

20. Triage and Ambulance Service in Disaster

452

20.1 Introduction 452; 20.2 Meaning of Triage 452; 20.3 Triage Category 453; 20.4 Objectives of Triage Nursing 453; 20.5 Goals of Triage 454; 20.6 Principles of Triage 454; 20.7 Triage Process 454; 20.8 Triage Priorities 455; 20.9 Patients Assessment 456; 20.10 Phases of Disaster 456; 20.11 START Model of Triage 457; 20.12 The Impact of Disaster First Aiders 458; 20.13 Triage Nurse 462; 20.14 Role of Triage Nurse 463

21. Emergency Department

464

21.1 Introduction 465; 21.2 Definition 466; 21.3 Meaning of Emergency Department 466; 21.4 Goals of Emergency Department 466; 21.5 Need of Emergency Care 467; 21.6 Function of Emergency Care/Casualty 467; 21.7 Designing for Accident and Emergency Department (A and ED) 468; 21.8 Infrastructure and Design of Casualty 469; 21.9 Site, Area and Design 470; 21.10 Staff Requirement in Emergency Department 476; 21.11 Common Problem Faced in Emergency Department 477; 21.12 Managerial Issues in Emergency Departments 477; 21.13 Medicolegal Aspects of Emergency Department 478; 21.14 Infection Control Practices for Emergency Department 478

22. Nursing Process

481

22.1 Introduction 482; 22.2 Definition 482; 22.3 The Purpose of Nursing Process 482; 22.4 Characteristics of a Nursing Process 482; 22.5 Steps in the Nursing Process 483; 22.6 Benefits of Nursing Process 484; 22.7 Nursing Assessment 485; 22.8 Nursing Diagnosis 487; 22.9 Nursing Planning 489; 22.10 Nursing Implementation 491; 22.11 Nursing Evaluation 492; 22.12 Emergency Nursing Practice 493

23. Physical Examination

494

23.1 Introduction 495; 23.2 Definition 495; 23.3 Meaning of Physical Examination 495; 23.4 Purpose 496; 23.5 Methods of Examination 496; 23.6 Head-to-Toe Examination 498; 23.7 Preparation of the Environment 502; 23.8 Preparation of the Equipment 502; 23.9 Preparation of the Patient 505;

23.10 Assistance in the Examination 505; 23.11 General Physical Examination: Quick Reference Guide 509; 23.12 Nurse's Responsibilities during Physical Examination 514

24. Pharmacological Therapy in Emergencies

515

24.1 Introduction *519*; 24.2 Purpose and General Action of Drugs *519*; 24.3 Routes of Drug Administration *519*; 24.4 Side Effects and Toxic Effects of Drug *520*; 24.5 Important Antidotes *521*; 24.6 Adverse Effects of Drugs *521*; 24.7 Factors Involved in Adverse Effects of Drugs *522*; 24.8 Scientific Principles *523*; 24.9 Responsibilities of the Nurse *523*; 24.10 Routine Times of Administration *524*; 24.11 Drugs are Classified according to their Action *524*; 24.12 Special Points to be Noted during any Injection *525*; 24.13 Drugs Used in Cardiac Arrest *526*; 24.14 Emergency Drug Management *527*

25. Medical-Surgical Emergencies

540

25.1 Introduction 543; 25.2 Epistaxis (Nosebleed) 543; 25.3 Esophageal Varices 544; 25.4 Status Epilepticus 547; 25.5 Increased Intracranial Pressure (ICP) 551; 25.6 Cerebral Venous Thrombosis (CVT) 554; 25.7 Stroke 556; 25.8 Aortic Aneurysm 565; 25.9 Asystole 567; 25.10 Cardiogenic Shock 569; 25.11 Cardiac Arrest 573; 25.12 Hepatic Encephalopathy (HE) and Coma 576; 25.13 Diabetic Ketoacidosis (DKA) 580; 25.14 Myxedema Coma 586; 25.15 Altered Level of Consciousness (LOC) 588; 25.16 Unconsciousness 595

26. Psychiatric Emergencies

601

26.1 Introduction 602; 26.2 Meaning of Psychiatric Emergencies 603; 26.3 Role of the ED in Managing Mental Illness 603; 26.4 Mental State Examination 603; 26.5 Overactive Patients 604; 26.6 Violent Patient 605; 26.7 Underactive or Depressed Patients 606; 26.8 Suicidal Patients 607; 26.9 Sexual Assault 608; 26.10 Delirium Tremens (Alcoholic Hallucinosis) 610; 26.11 Hysteria 612; 26.12 Rape 613; 26.13 Sudden Infant Death Syndrome (SIDS) 614

27. Emergencies in Reproductive, Maternal and Childbirth

617

27.1 Introduction 618; 27.2 Definition 618; 27.3 Types of Obstetric Emergencies 618; 27.4 Immediate Assessment 619; 27.5 Obstetric Emergencies during Labor and Delivery 619; 27.6 Clinical Manifestations of Obstetric Emergencies 620; 27.7 Diagnostic Evaluation in Obstetrical Emergency 620; 27.8 Emergency Care Activities 621; 27.9 Preventive Measures 621; 27.10 Vasa Previa 621; 27.11 Cord Presentation and Prolapse 623; 27.12 Shoulder Dystocia 625; 27.13 Amniotic Fluid Embolism (AFE) 629; 27.14 Obstetrical Shock 632; 27.15 Rupture of Uterus 637; 27.16 Obstructed Labor 640; 27.17 Miscarriage 642; 27.18 Childbirth 642

28. Pediatric Emergencies

649

28.1 Introduction *650*; 28.2 Pediatric Emergency Nursing Care *650*; 28.3 Pediatric Triage *650*; 28.4 Pediatric Triage Approach *651*; 28.5 Assessment Skills *652*; 28.6 Child Abuse *653*; 28.7 Infantile Convulsions *656*; 28.8 Burns *658*; 28.9 Drowning *662*; 28.10 Foreign Bodies *664*; 28.11 Poisoning *665*; 28.12 Naphthalene Poisoning *667*; 28.13 Asphyxia Neonatorum *668*; 28.14 Idiopathic Respiratory Distress Syndrome (RDS) *670*

29.	Community Emergencies	672
	29.1 Introduction 673; 29.2 Definition 674; 29.3 Factors Affecting Disaster 6	<i>574</i> ;
	29.4 Types of Disaster 675; 29.5 Natural Disaster 675; 29.6 Man-made	
	Disaster 678; 29.7 Triage 679; 29.8 Earthquakes 680; 29.9 Floods 681;	
	29.10 Cyclones 682; 29.11 Lightning 683; 29.12 Civil Defense 684; 29.13 F	∃igh
	Explosive (HE) Bombing 685; 29.14 Incendiary Bombs 685; 29.15 Nuclear	

Weapons 685; 29.16 Chemical Warfare 686; 29.17 Biological Warfare 686; 29.18 Emergency Management Continuum 687; 29.19 Disaster Management 688; 29.20 Disaster Response 689; 29.21 Disaster Interventions 690; 29.22 Community Measures in Disaster 692; 29.23 Nurses' Role in Disaster Management 692

30. Advanced Lifesaving Procedures

696

30.1 Advanced Cardiac Life Support 697; 30.2 Cardioversion and Defibrillation 702; 30.3 Pacemakers 705; 30.4 Arterial Blood Gas (ABG) Analysis 711; 30.5 Mechanical Ventilation 714; 30.6 Ventilator Setting Up 721; 30.7 Artificial Airway Management 727; 30.8 Endotracheal Intubation 730; 30.9 Suctioning Techniques 734; 30.10 Endotracheal Extubation 737; 30.11 Tracheostomy Care 739; 30.12 Tracheostomy Suctioning 744

Glossary 747
Index 753