# FELLOWSHIP IN EMERGENCY AND TRAUMA CARE NURSING

#### **ABOUT THE COURSE:**

Malla Reddy School of Nursing Science and Technology believes that registered nurses need to be trained in Emergency and Trauma care in clinical and community settings in order to provide competent care to patients and enhance their quality of life. Nurses play vital role in prevention, promotion, curative and rehabilitative care. Expanding roles of nurses and advances in technology necessitate additional training to prepare them for effective participation in providing such vital role. This Fellowship program is designed for nurses to enhance their knowledge and skills towards Emergency and Trauma care.

This fellowship course is developed to help the student to recognize the etiology, pathophysiology, symptomatology, diagnostic measures, and management of patients with malignant conditions affecting various systems. The course will further help the graduates to acquire knowledge and skills in providing comprehensive nursing care to such patients and attempts to explore and expand nursing knowledge through nursing research.

#### **OBJECTIVES:**

The graduates of fellowship students will be able to:

- > Provide quality cares.
- ➤ Manage & supervise care of critically ill patients.
- Teach nurses, allied health professionals and family members in areas related to Emergency and Trauma care.
- > Conduct research in areas of Emergency and Trauma care.

#### ELGIBILITY

• Registered BSc Nursing in India or equivalent.

#### **DURATION:** 52 Weeks or One Academic Year

### **COURSE DESCRIPTION**

The course is designed to prepare registered B.Sc (N) with specialized knowledge, skills and attitude in providing advance quality care to emergency patients and their families at all the three levels of care.

### **EVALUATION**

The examination will be conducted by school of nursing science and technology, Malla Reddy Vishwavidhyapeeth deemed to be university.

### CRITERIA TO APPEAR THE EXAM

- 80% attendance in theory
- 100% attendance in practical

### **CRITERIA TO PASS**

- In order to pass a candidate should obtain 50% in theory and 50% in practical separately
- A candidate should get 50% in internal assessment.

### AWARD OF CERTIFICATE

Certificate will be awarded by Malla Reddy Vishwavidhyapeeth deemed to be university

S.No	COURSE	SUBJECTS	THEOR	LAB	CLINIC	TOTAL
	CODE		Y		AL	
1		Basic Nursing for	60	20	120	200
		Emergency and				
		Trauma care				
		(No Exam)				
2		Emergency and	80	20	300	400
		Trauma care – I				
3		Emergency and	80	20	300	400
		Trauma care – II				
1						

# BASIC NURSING FOR EMERGENCY AND TRAUMA CARE NURSING

# Theory: 60 hours Lab: 20 hours Practical: 120 hours

Unit	Hour s	Learning objectives	Content	Teaching Learning	Assessment Methods
		<b>J</b>		Activity	
I	20	<ul> <li>Review relevant anatomy and physiology</li> <li>Understand changes in malignancy</li> <li>Recognize opioid use implications</li> </ul>	Applied Anatomy & Physiology         > Review         • Cell structure and physiology         ✓ Normal cell         ✓ Malignant cell         • Neurological system         • Respiratory system         • Blood and lymphatics         • Cardiovascular system         • Gastro intestinal system         • Endocrine system         • Musculoskeletal system         • Genitourinary system         • Reproductive system         • Sensory       system         • Documentation       and         Instruction to be taken while       taking opioids         • Nurses       role       while         • administering       opioids       and	<ul> <li>Activity</li> <li>Lectures</li> <li>Diagrams &amp; charts</li> <li>Case-based discussion</li> <li>Opioid role-play &amp; scenarios</li> </ul>	<ul> <li>Written test</li> <li>Viva voce</li> <li>Practical demonstrati on</li> <li>Case study evaluation</li> </ul>
Unit II	10	<ul> <li>Understand pharmacodyna mics/kinetics</li> <li>Identify key drug groups in palliative care</li> <li>Safe drug administration</li> </ul>	<ul> <li>Pharmacology         <ul> <li>➢ Review</li> </ul> </li> <li>Pharmacokinetics</li> <li>Drug reaction and toxicity</li> <li>Drugs used in emergency</li> <li>Anesthetic agents</li> <li>Analgesics / Anti inflammatory agents</li> <li>Antibiotics</li> <li>Antiseptics</li> <li>Inotropic</li> <li>Antianginals</li> <li>Antiaarythmics</li> </ul>	<ul> <li>Lectures</li> <li>Drug cards</li> <li>Case</li> <li>scenarios</li> <li>Demo on safe</li> <li>administratio n</li> </ul>	<ul> <li>Drug chart assignments</li> <li>MCQs</li> <li>Practical OSCE</li> <li>Peer discussion</li> </ul>

			Anticoagulants		
			+ Thrombolytic		
			+ Antiplatelets		
			+ Haemostatic /		
			antihemmorhagic		
			+ Antiepileptic		
			+ Bronchodilators		
			+ Antihistaminic, anti-allergy,		
			Antidotes		
			+ Potassium chloride, calcium		
			gluconate, sodabicab		
			Sedatives, muscle relaxant		
			□Principles of drug administration,		
			role of nurses and care of drugs		
Unit	10	<ul> <li>Communicat</li> </ul>	<b>Psychosocial and Family Support</b>	• Group	• Reflective
III		e effectively	• Communication with patients	discussions	journaling
		with	and families	• Role plays	• Peer
		patients/famili	• Stress management for	• Family	feedback
		es • Support crief	patients and caregivers	imulation	• Case
		• Support grief	• End-of-life care and decision-	• Counseling	presentation
		needs	making	session	5
		<ul> <li>Address</li> </ul>	• Grief loss and palliative	observation	
		caregiver	approach	ooser varion	
		stress	approach		
Unit	10	• Explain	Emergency and Trauma Care	• Lectures	• OSCE
IV		concepts of	Management	● Demonstrat	• Skill
		emergency/dis	• Definition, concepts and	ion (CPR,	checklists
		aster care	principles of emergency and	intubation)	• Viva
		• Organize	disaster nursing	•Simulation	• MCQs
		emergency		-based	
		Derform	• Organization of	Group	
		triage and	resources(men, material and	• Group	
		emergency	facilities)- Ambulance,	discussions	
		procedures	training of volunteers		
		1	• Legal requirements of		
			Ambulance		
			Nursing process		
			Emergency unit		
			Introduction		
			• Triage		
			Concepts of triage		
			• Role of triage nurse		
			• Triage skills		

		<ul> <li>Basic life support (BLS)</li> <li>Advanced Cardiac Life support (ACLS) Defibrillation, monitoring, O<sub>2</sub>Therapy, endotracheal intubation, Care of patient on ventilators, pace maker and tracheostomy</li> <li>Fluid and electrolyte and acid- base balance</li> <li>Pain: assessment and management</li> <li>Regulation of body temperature</li> <li>Unconsciousness</li> <li>Death and Dying</li> </ul>		
Unit 10 V	<ul> <li>Apply nursing process in medical emergencies</li> <li>Manage various system-related emergencies</li> </ul>	<ul> <li>Medical Emergencies</li> <li>Application of nursing process pertaining to care of patients with</li> <li>Fluid, electrolyte and acid base imbalances</li> <li>Endocrine emergencies</li> <li>Respiratory emergencies</li> <li>Cardiovascular emergencies</li> <li>Cardiovascular emergencies</li> <li>Poisoning bites and stings</li> <li>Thermo regulatory emergencies</li> <li>Neurological emergencies</li> <li>Gastro-Intestinal emergencies</li> <li>Shock and Hemorrhage</li> <li>Drowning</li> <li>Food Poisoning</li> <li>Gastrointestinal emergencies</li> <li>Perforation</li> <li>Intestinal obstruction</li> <li>Peritonitis</li> <li>Appendicitis, burst abdomen and acute abdomen</li> </ul>	<ul> <li>Simulation</li> <li>-based case</li> <li>management</li> <li>Group</li> <li>case studies</li> <li>Scenario</li> <li>enactment</li> <li>Clinical</li> <li>teaching</li> <li>rounds</li> </ul>	<ul> <li>Written test</li> <li>OSCE</li> <li>Case scenario evaluation</li> <li>Group presentation s</li> </ul>

# EMERGENCY AND TRAUMA CARE - I

# Theory: 80 hours Lab: 20 Hours Practical: 300 hours

Unit	Hour s	Learning objectives	Content	Teaching Learning	Assessment Methods
		•		Activity	
Unit - I	10	<ul> <li>Understan d the evolution, scope, and principles of emergency and trauma care</li> <li>Identify the setup and equipment used in critical care units</li> </ul>	<ul> <li>Introduction to Emergency and Trauma care <ul> <li>Historical review</li> <li>Concepts of Emergency and Trauma care</li> <li>Principles of Emergency and Trauma care</li> <li>Scope of Emergency and Trauma care</li> <li>Critical care unit set up including equipment, supplies, use and care of various type of monitors, ventilators</li> <li>Flow sheets</li> </ul> </li> </ul>	<ul> <li>Lectures</li> <li>Videos on</li> <li>ICU setup</li> <li>Hands-on</li> <li>demo of</li> <li>monitors</li> <li>Field visit</li> <li>to ICU</li> </ul>	<ul> <li>MCQ</li> <li>Equipment identificatio n quiz</li> <li>Viva</li> </ul>
Unit - II	20	<ul> <li>Apply holistic care principles in trauma settings</li> <li>Recognize psychologic al impacts of critical care</li> <li>Prevent burnout in health team</li> </ul>	<ul> <li>Concept of Holistic care applied to Emergency and Trauma care practice <ul> <li>Psychophysiological &amp; Psychosocial impact of critical care unit on patients:-</li> <li>Risk factors, Assessment of patients, Critical care psychosis, Prevention &amp; nursing care for patients affected with Psychophysiological &amp; Psychosocial problems of critical care unit, Caring for the patient's family, family teaching</li> <li>The dynamics of healing in trauma care unit:-</li> <li>Dynamics of touch, Relaxation, Music therapy, Guided Imagery</li> <li>Stress and burnout syndrome among health team members</li> </ul> </li> </ul>	<ul> <li>Group discussion</li> <li>Case study analysis</li> <li>Music therapy demo</li> <li>Peer-led presentations</li> </ul>	• Case presentation • Role play assessment

Unit -	10	•Understan	Pain Management	• Lectures	Practical
III		d pain	• Pain & sedation in critically ill	• Pain scale	OSCE
		theories	,	practice	• Short
		• Assess	Theories of pain, Types of pain, Pain	• Video case	answer test
		and manage	assessment, Systemic responses to pain	scenarios	• Peer
		pain and	Pain management, Sedation in critically	<ul> <li>Simulation</li> </ul>	feedback
		sedation in	ill patients, Placebo effect	lab on	
		critically ill		sedation	
		patients			
Unit	10	• Identify	Infection control in intensive care	• Lab demo	• Skill
IV		and manage	• Nosocomial infection in	of	demo
		infection	intensive care unit; methyl	disinfection	checklist
		risks in ICU	resistant staphylococcus aureus	<ul> <li>Role play</li> </ul>	• MCQs
		• Apply	(MRSA) Disinfection	of standard	
		infection	Sterilization Standard	precautions	
		control	Dracoutions Dranbulavia for	• Case	
		practices	Precautions, Prophylaxis for	discussion	
		effectively	staff	on MRSA	
Unit	10	• Apply the	Introduction to Nursing Process	• Lecture	• Written
V	10	nursing	Assessment	Nursing	care plan
v		process in	<ul> <li>Nursing diagnosis</li> </ul>	process	• Practical
		emergency	Nursing care plan	charting	case
		care		• Clinical	evaluation
			• Implementation	case	• Viva voce
			• Evaluation	discussion	
Unit	10	• Assess	Nutritional Management in the	• Bedside	• Diet chart
VI		nutritional	critically ill patient	nutrition	evaluation
		needs in	• Assessing nutritional status of	assessment	• Practical
		critical care	patient	<ul> <li>Diet plan</li> </ul>	checklist
		•Administer	• Implications of under	activity	• MCQs
		appropriate	nourishment in critically ill	•	
		nutritional	patients	Demonstrati	
		support	<ul> <li>Fluid &amp; electrolyte management</li> </ul>	on of tube	
			Administering nutrition support	reeding/TPN	
			Administering nutrition support,     Therementia dist. Various		
			• Therapeutic diet - Various		
			disease conditions, 1 otal		
			parenteral and enteral nutrition		
Unit	10	• Provide	Care of dying patients	• Role play	• Reflective
VII		compassion	• Spiritual support to the dying	• Griei	writing
		ate care to	• Grief and grieving process	counsening	• Group
		natients	Bereavement support	Guest	
		patients	Organ donation & Counselling	- Ouesi	3

• Offer	• Care of dead	session	• Viva
grief support		(spiritual	
to families		care/organ	
•		donation	
Understand		team)	
organ			
donation			
process			

# **EMERGENCY AND TRAUMA CARE – II**

# Theory: 80 hours Lab: 20 Hours Practical: 300 hours

Unit	Hour s	Learning objectives	Content	Teaching Learning	Assessment Methods
Unit-I	10	•Understan d pathophysio logy and management of GI emergencies	<ul> <li>Gastrointestinal System</li> <li>Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and Nursing management of:-</li> <li>Acute Gastrointestinal Bleeding, Hepatic Disorders:-</li> <li>Fulminant hepatic failure. Hepatic encephalopathy, Acute Pancreatitis, Acute intestinal obstruction, peritonitis Perforate</li> </ul>	<ul> <li>Activity</li> <li>Lectures</li> <li>Case study discussions</li> <li>Diagnostic interpretationn</li> </ul>	<ul> <li>MCQs</li> <li>Case- based viva</li> <li>Written test</li> </ul>
Unit- II	10	• Manage acute and chronic renal disorders and dialysis modalities	<ul> <li>Renal System         <ul> <li>Causes, pathophysiology, Clinical types, Clinical features, diagnosis.</li> <li>Prognosis, Management: medical, surgical and Nursing management. of:</li> <li>Acute Renal Failure, Chronic Renal failure, Acute tubular necrosis, Bladder trauma</li> </ul> </li> <li>Management Modalities Haemodialysis, Peritoneal Dialysis, Continuous Ambulatory Peritoneal</li> </ul>	<ul> <li>Demonstrat ion of dialysis procedures</li> <li>Video sessions</li> <li>Group discussion</li> </ul>	<ul> <li>OSCE</li> <li>Skill</li> <li>checklist</li> <li>Scenario- based test</li> </ul>

			Dialysis, Continuousarteries venous haemodialysis, Renal Transplant		
Unit - III	10	• Manage neurological emergencies and complicatio ns	<ul> <li>Nervous System</li> <li>Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis Management: medical, surgical and Nursing management. of:</li> <li>Common Disorders: Neurological.</li> <li>Cerebrovascular disease.</li> <li>Cerebrovascular accident, Seizure disorders, Guillen-Barre-Syndrome, Myasthenia Gravis, Coma, Persistent vegetative state, Encephalopathy, Head injury, Spinal Cord Injury <ul> <li>Management Modalities</li> </ul> </li> <li>Assessment of Intracranial pressure, Management of intracranial hypertension, Craniotomy <ul> <li>Problems associated with neurological disorders</li> </ul> </li> <li>Thermal regulation, Unconsciousness, Herniation syndrome</li> </ul>	<ul> <li>Simulation- based teaching</li> <li>Neuro assessment demo</li> <li>Group presentations</li> </ul>	<ul> <li>Neurologi cal assessment demo</li> <li>Viva</li> <li>Case presentation</li> </ul>
Unit- IV	5	• Manage endocrine emergencies	<ul> <li>Endocrine System</li> <li>Causes, pathophysiology, Clinical types, Clinical feature Prognosis, Manager surgical and Nursing management of</li> <li>Hypoglycaemia, Diabetic ketoacidosis. Thyroid crisis, Myxoedema coma, Adrenal crisis, Syndrome of Inappropriate/ hypersecreting of Antidiuretic Hormone (SIADH)</li> </ul>	<ul> <li>Case scenarios</li> <li>Lab result interpretation</li> <li>Simulation</li> </ul>	<ul> <li>MCQs</li> <li>Group quiz</li> <li>Practical demo</li> </ul>
Unit- V	5	• Manage trauma and shock conditions	Management of other Emergency Conditions • Trauma Mechanism of injury. Thoracic injuries,	<ul> <li>Trauma simulations</li> <li>Shock management drills</li> </ul>	<ul> <li>Scenario</li> <li>OSCE</li> <li>Written</li> <li>test</li> <li>Group</li> </ul>

			<ul> <li>Abdominal injuries, Pelvic fractures, Complications of trauma, Head injuries <ul> <li>Shock</li> </ul> </li> <li>Shock syndrome, Hypovelmic shock, Cardiogenic shock, Anaphylactic shock, Neurogenic shock, Septic shock <ul> <li>Systemic Inflammatory Response</li> </ul> </li> <li>The inflammatory response. Multiple organ dysfunction syndrome Disseminated Intravascular Coagulation, Drug Overdose and Poisoning. AIDS: Acquired Immunodeficiency Syndrome</li> </ul>	• Emergency response workshops	project
Unit- VI	10	• Manage critical cardiovascul ar conditions and intervention s	<ul> <li>Intensive Cardiothoracic Nursing <ul> <li>Principles of Nursing in caring for patient's with Cardio thoracic disorders</li> </ul> </li> <li>Assessment: Cardiovascular System Heart sounds, Diagnostic studies: Cardiac enzymes studies, Electrocardiographic monitoring, Halter monitoring, Stress test, Echo cardiograph. Coronary angiography, Nuclear medicine studies</li> <li>Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis, Management: medical, surgical and Nursing management of:-</li> <li>Hypertensive crisis, Coronary artery disease, Acute Myocardial 2 Infarction, Cardiomyopathy. Deep vein thrombosis, Valvular diseases, Heart block, Cardiac arrhythmias &amp; conduction. disturbances, Aneurysms, Endocarditis, Heart failure Cardio pulmonary resuscitation -</li> </ul>	<ul> <li>ECG reading sessions</li> <li>CPR practice</li> <li>Case- based learning</li> </ul>	• Practical demo • ACLS skill test • Case evaluation

			<ul> <li>BCLS/ACLS</li> <li>Management Modalities</li> <li>Thrombolytic therapy, Pacemaker temporary permanent, Percutaneous transluminal coronary angioplasty. Cardioversion, Intra Aortic Balloon Pulsations. Defibrillations, Cardiac surgeries, Coronary Artery Bypass Grafts (CABG/MICAS), Valvular surgeries, Heart Transplantation, Autologous Blood Transfusion, Radiofrequency Catheter Ablation.</li> </ul>		
Unit- VII	10	• Assess and manage acute/chroni c respiratory conditions	<ul> <li>Respiratory System</li> <li>Acid base balance &amp; imbalance</li> <li>Assessment: History &amp; Physical Examination Diagnostic Tests:</li> <li>Pulse Oximetry, End-Tidal Carbon Dioxide Monitoring, Arterial blood gas studies. Chest Radiography. Pulmonary Angiography. Bronchoscopy, Pulmonary function Test, Ventilation perfusion scan, Lung ventilation scan</li> <li>Causes, pathophysiology, Clinical types, Clinical features, Prognosis Management: medical, surgical and Nursing management of Common Pulmonary Disorders:- Pneumonia, Status asthmatics, Interstitial lung disease, Pleural effusion, Chronic obstructive pulmonary disease, Pulmonary tuberculosis, Pulmonary oedema, Atelectasis, Pulmonary embolism, Acute respiratory failure, Acute respiratory distress</li> </ul>	<ul> <li>ABG interpretatio</li> <li>Nentilator</li> <li>demo</li> <li>Pulmonary</li> <li>function</li> <li>practice</li> </ul>	• OSCE • Practical skill test • Viva

Unit- VIII	5	• Provide comprehensi ve care for burn patients	<ul> <li>syndrome(ARDS), Chest Trauma Haemothorax, Pneumothorax</li> <li>Management Modalities: Airway</li> <li>Management         <ul> <li>Ventilator Management:- Invasive, non-invasive, long term mechanical ventilations</li> <li>Bronchial Hygiene: Nebulization, deep breathing exercise, chest physiotherapy, postural drainage Inter Costal Drainage, Thoracic surgeries</li> </ul> </li> <li>BURNS         <ul> <li>Clinical types, classification, pathophysiology, Clinical features, assessment, diagnosis, Prognosis Management: medical, surgical and Nursing management of burns</li> <li>Fluid and electrolyte therapy- calculation of fluids and its administration</li> <li>Pain management.</li> </ul> </li> </ul>	<ul> <li>Burn care simulation</li> <li>Fluid calculation practice</li> <li>Group activity</li> </ul>	<ul> <li>Fluid therapy assignment</li> <li>Wound care checklist</li> <li>Skill demo</li> </ul>
			<ul> <li>Wound care</li> <li>Infection control</li> <li>Prevention and management of burn complications</li> <li>Grafts and flaps</li> <li>Reconstructive surgery</li> <li>Rehabilitation</li> </ul>		
Unit-	10	• Manage	Neonatal Paediatric Nursing	Paediatric	• Skill
IX		neonatal and paediatric	Causes, pathophysiology, Clinical types, Clinical features, diagnostic. Prognosis.	scenario simulation	<ul><li>checklist</li><li>Case-</li></ul>
		emergencies	Management: medical, surgical and	• Neonatal	based
			<ul> <li>Nursing management of</li> <li>Neonatal emergencies</li> </ul>	assessment demo	OSCE     Viva voce
			Assassment of new horn I are Dirth	• Parent	
			Weight infant, Asphyxia Neonate,	counseling role plays	
			Pathological Jaundice in Neonates,	<b>F</b> - <b>w</b> <i>J</i> ~	
			Neonatal seizures, Metabolic disorders,		

			<ul> <li>Intra cranial Haemorrhage, Neonatal Sepsis, RDS/HMD (Respiratory Distress Syndrome/Hyaline Membrane Disease), Status asthmatics <ul> <li>Congenital disorders:-</li> </ul> </li> <li>Cyanotic heart disease, trachea oesophageal fistula, congenital hypertrophic pyloric stenosis, imperforate anus</li> <li>Paediatric emergencies</li> <li>Dehydration, Acute bronco pneumonia, Acute respiratory distress syndrome, Poisoning. Foreign bodies</li> <li>Psychosocial issues of the child &amp; family</li> <li>Management modalities</li> <li>Management of hypothermia, ventilator management</li> </ul>		
Unit- X	5	• Respond to obstetric emergency conditions	<ul> <li>Obstetrical emergencies</li> <li>Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis</li> <li>Management: medical, surgical and</li> <li>Nursing management of: <ul> <li>Antepartum Preeclampsia, haemorrhage, eclampsia,</li> <li>Obstructed labour and ruptured uterus, Post partumhaemorrhage,</li> <li>Puerperal sepsis, obstetrical shock</li> </ul> </li> </ul>	<ul> <li>Emergency drills</li> <li>Simulation using mannequins</li> <li>Scenario role plays</li> </ul>	<ul> <li>Practical exam</li> <li>Group quiz</li> <li>OSCE</li> </ul>

# **Research Activity:**

An independent research is to be carried out by the student.

## ESSENTIAL EMERGENCY AND TRAUMA CARE SKILLS

## I. Procedures Observed

- 1. CT Scan
- 2. MRI
- 3. EEG
- 4. Hemodialysis
- 5. Endoscopic Retrograde CholangioPancreaticogram (ERCP)
- 6. Heart/ Neuro/GI./ Renal Surgeries

## **II. Procedures Assisted**

- 1. Advanced life support system
- 2. Basic cardiac life support
- 3. Arterial line/arterial pressure monitoring/blood taking
- 4. Arterial blood gas
- 5. ECG recording
- 6. Blood transfusion
- 7. IV cannulation therapy
- 8. Arterial Catheterization
- 9. Chest tube insertion
- 10. Endotracheal intubations
- 11. Ventilation
- 12. Insertion of central line/cvp line
- 13. Connecting lines for dialysis

# **III. Procedure Performed**

- 1. Airway management
- a. Application of oropharyngeal airway
- b. Oxygen therapy
- c. CPAP (Continuous Positive Airway pressure)
- d. Care of tracheostomy
- e. Endotracheal extubation
- 2. Cardiopulmonary resuscitation, Basic cardiac life support, ECG
- 3. Monitoring of critically ill patients clinically with monitors, capillary refill time (CRT)
- assessment of jaundice, ECG.
- 4. Gastric lavage
- 5. Assessment of critically ill patients

Identification & assessment of risk factors, Glasgow coma scale, and dolls eye movement, arterial pressure monitoring, cardiac output/pulmonary artery pressure monitoring, and detection of life threatening abnormalities

6. Admission & discharge of critically ill patients

7. Nutritional needs – gastrostomy feeds, pharyngeal feeds, jejunostomy feeds, TPN, formula preparation & patient education.

8. Assessment of patient for alteration in blood sugar levels monitoring blood sugar levels periodically & administering insulin periodically.

9. Administration of drugs: IM, IV injection, IV cannulation & fixation of infusion pump, calculation of dosages, use of insulin syringes/ tuberculin, monitoring fluid therapy, blood administration.

10. Setting up dialysis machine and starting, monitoring and closing dialysis

11. Procedures for prevention of infections:

Hand washing, disinfection & sterilization surveillance, and fumigation universal precautions.

12. Collection of specimen.

13. Setting, use & maintenance of basic equipment, ventilator, O2 analyzer, monitoring equipment, transducers, defibrillator, infusion & syringe pumps, centrifuge machine.

# Signature of Resident/SNO