

DIPLOMA IN CRITICAL CARE TECHNOLOGY

SYLLABUS : Preliminary Course- 160 Hours

THEORY : 60 TEACHING HOURS

Basics of critical care services : 13 hours

Introduction

Cardiopulmonary resuscitation – basic & advanced

Advanced Cardiac Life Support

Oxygen Therapy

Aerosol therapy

Mechanical Ventilation

Patient Para monitoring

Complications of ICU care

Nutrition for critically ill patients

Infection in ICU – prevention & Control

Ethical issues

Chest Physiotherapy

Principles underlying different procedures and Equipments and Clinical Application : 47 hours

Blood Gas analysis

Blood Electrolyte analysis

Pulse Oxymetry

Capnometry

Mechanical Ventilation

Multimodality Bedside Monitor & Central Monitor

ECG

Defibrillator – Monitor

Temporary Pacemaker

Oxygen – storage and supply

Sucker Machine

Nebuliser

Bronchoscopy

Glucometer

Sterilization

Chest Physiotherapy

PRACTICAL : 100 HOURS

(ASSISTING OPERATION MAINTENANCE OF DIFFERENT EQUIPMENTS AND CHEST PHYSIOTHERAPY)

SYLLABUS : Final Course – 260 Hours

THEORY : DIFFERENT PROCEDURES & EQUIPMENTS : 80 TEACHING HOURS

Blood Gas Analysis : Specimen collection & handling, operation, principle of operation, maintenance, trouble shooting, installation, programming

Blood electrolyte analysis : same as above

Bedside Monitor : System introduction, external devices, monitoring basics, setting different parameters, setting ECG, Respiration, Temperature, NIBP, Spo2, Invasive BP, cardiac output, spirometry, ETco2

Operation, display, recording, printing, Cleaning & care, Troubleshooting, safety precautions.

Central Monitor: System introduction, setting, display, recording, printing, troubleshooting, maintenance – warning, cautions, disposal, cleaning, preventive maintenance, messages.

Mechanical Ventilator: Physical principles, types, modes application, different types of ventilators, parts of a ventilator, operating procedures, technological troubleshooting.

Principles, operation, monitoring, troubleshooting of –

Glucometer, infusion pump, ECG, Pulse Oxymeter, Fibreoptic Bronchoscope, Difibrilator – monitor, oxygen supply, suction machine, Oxygen concentrator, portable oxygen cylinder & accessories.

Renal failure in critically ill patients.

CRRT : a) Parts of machine, operation, principle underlying, maintenance & troubleshooting and quality control.
 b) Clinical application

PRACTICAL : 180 HOURS

1. To perform procedures and operate different equipments
2. Actual maintenance of equipments
3. Data recording & processing in computer
4. Application and maintenance of CRRT at bedside
5. Demonstration & Hands on training on salient aspects of Anaesthesia Machine as :
 - (a) Parts of the machine, operation, principle underlying, maintenance & troubleshooting and quality control.
 - (b) Clinical application.