

# DIPLOMA IN CATH-LAB-TECHNICIAN

## SYLLABUS

### Preliminary Course

<b>ANATOMY:</b>	
<i>Sl.No.</i>	<i>Particulars</i>
<i>01</i>	<i>Basic cells and tissues</i>
<i>02</i>	<i>Heart: Pericardium, chambers, valves, conduction systems great vessels</i>
<i>03</i>	<i>Circulation : major arteries and veins</i>
<i>04</i>	<i>Lungs and pleura, diaphragm</i>
<i>05</i>	<i>Liver, Spleen, Kidney, Brain</i>
<b>PHYSIOLOGY:</b>	
<i>01</i>	<i>Circulatory systems</i>
<i>02</i>	<i>Autonomic nervous system</i>
<i>03</i>	<i>Action potential, muscles contraction</i>
<i>04</i>	<i>Gas exchange</i>
<i>05</i>	<i>Thrombosis, platelet function</i>
<i>06</i>	<i>Renin angiotensin system</i>
<i>07</i>	<i>Kidney : Physiology</i>
<b>PHARMACOLOGY:</b>	
<i>01</i>	<i>General Pharmacology</i>
<i>02</i>	<i>Sedatives</i>
<i>03</i>	<i>Anaesthetics agents</i>
<i>04</i>	<i>Analgesics</i>
<i>05</i>	<i>Drugs used for heart disease: Antianginal, Antiarrhythmic, anti failure, vessopressors, vasodilators, cardiac imaging agents, anti thrombotics</i>
<b>PREVENTIVE CARDIOLOGY:</b>	
<i>01</i>	<i>Diat and Nutrition</i>
<i>02</i>	<i>Smoking</i>
<i>03</i>	<i>Exercise and heart</i>
<b>MICROBIOLOGY:</b>	
<i>01</i>	<i>Specimen collection : Blood, urine, sputum, etc.</i>
<i>02</i>	<i>Bacteria and viruses in CVS</i>
<i>03</i>	<i>Serology and immunology</i>

## **SYLLABUS**

### **Final Course**

<b>RADIOLOGY:</b>	
<i>Sl.No.</i>	<i>Particulars</i>
01	<i>Principles of X-Rays</i>
02	<i>Protection from radiation</i>
03	<i>Description and recognition of Chest X-Rays</i>
04	<i>Different views of chest for identification of cardiopulmonary structures</i>
05	<i>Ultrasonography : Principles</i>
06	<i>Basic of Echocardiography</i>
<b>ECG:</b>	
01	<i>ECG machine : Parts</i>
02	<i>Technical of taking an ECG</i>
03	<i>Pitfalls in taking ECGs</i>
04	<i>Recognition of normal ECG waves</i>
05	<i>Abnormal ECG</i>
<b>DEFIBRILLATION:</b>	
01	<i>Technique</i>
02	<i>Indication</i>
03	<i>Complications</i>
<b>DISEASES OF HEART:</b>	
01	<i>Congenital</i>
02	<i>Rheumatic</i>
03	<i>Myocardial and pericardial</i>
04	<i>Coronary artery diseases</i>
05	<i>Hypertension</i>
06	<i>Pulmonary thromboembolism and pulmonary hypertension</i>
07	<i>Respiratory failure</i>
<b>CATHETERS AND INSTRUMENTS:</b>	
01	<i>Arterial Blood Gases : Technique and interpretation</i>
02	<i>Haemodynamic monitoring: Technique, recognition, indication, complications.</i>
03	<i>Fluid and electrolytes</i>
04	<i>X-ray imaging in cath lab</i>
05	<i>Intra Aortic Ballon Pulsation: Indication, Technique and complications</i>
06	<i>Artificial ventilation</i>
07	<i>Extra Corporeal Membrane Oxygenator</i>
08	<i>Different views of cardiac catheterization</i>
09	<i>Transducer, outline of C-arm, cineangio machine and oxymetry</i>
10	<i>Interventional catheters, balloon and stents.</i>