

# **REVISED SYLLABUS**

**For**

# **D.C.L.T**

**(Diploma in Cath Lab Technology)**



**Lal Bahadur Shastri Paramedical Skill and  
Training Council India**

**लाल बहादुर शास्त्री पराचिकित्सीय कौशल एवं प्रशिक्षण  
परिषद भारत**

मुख्य कार्यालय:— 4 वीं मंजिल, प्राइम प्लाजा, इन्दिरा नगर, लखनऊ।

प्रशासनिक कार्यालय:— द्वितीय तल, सुनील कॉम्प्लेक्स, वेस्टर्न कचहरी रोड, मेरठ।

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**Exam: March and April**

**(To be implemented from 2024-25 session)**



## Syllabus of Diploma in Cath Lab Technology

### FIRST YEAR (1<sup>st</sup>)

| S. No.    | Subjects               | Distribution of Marks |    |           |             |
|-----------|------------------------|-----------------------|----|-----------|-------------|
|           |                        | TH                    | PR | Viva-voce | Total       |
| Paper I   | Basic Anatomy          | 100                   | 75 | 25        | 200         |
| Paper II  | Physiology & Pathology | 100                   | 75 | 25        | 200         |
| Paper III | Pharmacology           | 100                   | 75 | 25        | 200         |
| Paper IV  | Preventive Cardiology  | 100                   | 75 | 25        | 200         |
| Paper V   | Microbiology           | 100-                  | 75 | 25        | 200         |
|           | <b>Total</b>           |                       | -  | -         | <b>1000</b> |

## Syllabus of Diploma in Cath Lab Technology

### SECOND YEAR (2<sup>nd</sup>)

| S. No.    | Subjects                  | Distribution of Marks |    |           |             |
|-----------|---------------------------|-----------------------|----|-----------|-------------|
|           |                           | TH                    | PR | Viva-voce | Total       |
| Paper I   | Radiology                 | 100                   | 75 | 25        | 200         |
| Paper II  | ECG                       | 100                   | 75 | 25        | 200         |
| Paper III | Defibrillation            | 100                   | 75 | 25        | 200         |
| Paper IV  | Diseases of Heart         | 100                   | 75 | 25        | 200         |
| Paper V   | Catheters and Instruments | 100                   | 75 | 25        | 200         |
|           | <b>Total</b>              |                       | -  | -         | <b>1000</b> |

## **Syllabus of Diploma in Cath Lab Technology**

### **First Year**

| <b>Sr. No</b> | <b>Subjects</b>       |
|---------------|-----------------------|
| <b>1</b>      | Anatomy               |
| <b>2</b>      | Physiology            |
| <b>3</b>      | Pharmacology          |
| <b>4</b>      | Preventive Cardiology |
| <b>5</b>      | Microbiology          |

### **Anatomy**

1. Basic cells and tissues.
2. Heart: Pericardium, chambers, valves, conduction system great vessels.
3. Circulation: Major arteries and veins.
4. Lungs and pleura, Diaphragm
5. Liver, spleen, kidney, brain.

### **Physiology**

1. Circulatory systems.
2. Autonomic nervous system.
3. Action potential muscles contraction.
4. Gas exchange.
5. Thrombosis, platelet function.
6. Renin angiotensin system.
7. Kidney: Physiology.

### **Pharmacology**

1. General pharmacology
2. Sedatives
3. Anesthetics agents
4. Analgesics
5. Drugs used for heart disease: Antianginal, Antiarrhythmic, Anti failure, Vasopressor, Vasodilators, Cardiac imaging agents, Anti thrombotic.

## **Preventive Cardiology (Patient care and hospital Practice)**

1. Diet and nutrition
2. Smoking
3. Exercise and heart

## **Microbiology**

1. Specimen collection: Blood, Urine Sputum Etc.
2. Bacteria and viruses in CVS
3. Serology and immunology

## **Syllabus of Diploma in Cath Lab Technology**

### **SECOND YEAR (PAPER SCHEME)**

#### **Radiology (basic phy of radiology)**

1. Principal of X-Ray
2. Protection form radiation
3. Description and recognition of chest X-Rays
4. Different views of chest for identification of cardiopulmonary Structures
5. Ultrasonography: Principal
6. Basic of Echocardiography

## **ECG**

1. ECG Machine: Parts
2. Technical of taking an ECG
3. Pitfalls in taking an ECG
4. Recognition normal ECG waves
5. Abnormal ECG

## **Defibrillation**

1. Technique
2. Indication
3. Complications

## **Diseases of Heart**

1. Congenital
2. Rheumatic
3. Myocardial and pericardial
4. Coronary artery diseases
5. Hypertension
6. Pulmonary thromboembolism and pulmonary hypertension
7. Respiratory failure

## **Catheters and Instruments**

1. L. Arterial blood gases: Techniques and interpretation
2. Hemodynamic monitoring technique, recognition, indication, complications.
3. Fluid and electrolytes
4. X-ray imaging in lab
5. Intra-Aortic balloon pulsation : Indication, Technique and complications
6. Artificial ventilation
7. Extra corporeal membrane oxygenator
8. Afferent views of cardiac catheterization
9. F...transducer, outline of C-arm, cineangiography machine oxymetry.