

SYLLABUS: ECG Technician in NDMC

Unit1. Introduction

- 1.1 Definition & Introduction
- 1.2 History & Physiological Basics
- 1.3 Velocity Concept
- 1.4 Impulse Generation & Transmission, Cardiac Pathway
- 1.5 Normal Cardiac Rhythm, Blood Pressure & Pulse Rate
- 1.6 Central Termination of Wilson

Unit2. Basics of ECG Technique

- 2.1 Getting the Patient Prepared for ECG
- 2.2 Application of Jelly
- 2.3 Placement of Chest & Limb Leads
- 2.4 Parameters for Recording a Good Electrocardiogram

Unit3. Manual Machine

- 3.1 Introduction
- 3.2 Parts of Manual ECG Machine
- 3.3 Mode of Functioning
- 3.4 Advantages & Disadvantages
- 3.5 Practical Demonstration

Unit4. Automated Machine

- 4.1 Introduction
- 4.2 Mode of Functioning
- 4.3 Advantages
- 4.4 Practical Demonstration

Unit5. ECG Leads, Jelly & ECG Paper

- 5.1 Unipolar & Bipolar Limb Leads
- 5.2 Augmentation Leads

- 5.3 Esophageal Leads
- 5.4 Color Codes in ECG Leads
- 5.5 ECG Jelly & Its Component
- 5.6 Role of ECG Jelly
- 5.7 ECG Paper & Properties
- 5.8 Normal Paper Speed & Standardization
- 5.9 Calibration
- 5.10 Filter

Unit6. Normal Electrocardiogram

- 6.1 Normal P, Q & T Wave
- 6.2 P-R Interval
- 6.3 QRS Complex
- 6.4 QT Interval & ST Segment
- 6.5 Purkinjee Fibres Repolarization
- 6.6 Interpretation of Normal ECG
- 6.7 Duration & Amplitude of Different Normal Waves
- 6.8 No. of Complexes in A Normal ECG

Unit7. Abnormal Electrocardiogram & Interpretation

- 7.1 Abnormal P-Wave & A-V Node
- 7.2 LBBB & RBBB
- 7.3 LVH & RVH
- 7.4 Wolf Parkinson White Syndrome
- 7.5 Trifasicular Blocks
- 7.6 Lown Ganong, Levine Syndrome
- 7.7 Mahim Bye pass
- 7.8 Chronic Pulmonary Lung Disease (COLD), Pulmonary Embolism & COPD
- 7.9 Myocardial Infarction & Mitral Stenosis
- 7.10 Mitral Valve Prolapse

7.11 Sinus Tachycardia & Sinus Bradycardia

7.12 Sick Sinus Syndrome

Unit8. Drugs & Electrolytes

8.1 Adrenaline, Acetyl Choline, Digitalis, Quinidine, Potassium, Hyperkalemia

8.2 Hyper & Hypocalcaemia, Phenothiazines, Anthrocyclines

Unit9. Electrocardiographic Changes: in

9.1 CVA

9.2 Pericarditis & Myocarditis

9.3 Heart Trauma & Heart Malignancies

9.4 Pericardial Effusion

9.5 Partial & Complete SA Block

9.6 Paroxysmal Atrial Tachycardia(PAT)

Unit10. ECG as a clue to clinical Diagnosis

10.1 Pulmonary Stenosis

10.2 Tricuspid Atresia

10.3 Atrial & Ventricular Septal Defect

10.4 Ebstein Anomaly

10.5 Mirror Image Dextrocardia

10.6 Rheumatic Heart Disease (RHD)

10.7 Athlete's Heart

10.8 Cardiac Pace Maker

Unit11. Exercise ECG & Tread-Mill Test

11.1 Introduction

11.2 TMT & Exercise ECG