

**Course Title: CARDIOLOGY TECHNIQUES-I AND CLINICAL PRACTICE**

**Study Hours: 60+160**

**Paper : 1**

**Term : 3<sup>rd</sup>**

**Marks**

**Theory: 120**

**Practical: 30**

**Time: 3Hrs**

**Course contents**

**STUDY HOURS  
(THEORY+PRACTICAL)  
30+30**

**A. CARDIAC ANATOMY**

**A1. Surface anatomy**

A1.1 Thorax

A1.2 Heart

**A2. Mediastinum**

A2.1 Superior Mediastinum & contents

A2.2 Inferior Mediastinum & contents (anterior, middle, posterior)

A3. Thoracic anatomy

A4. Gross anatomy of heart

A4.1 Surfaces

A4.2 Borders

A4.3 Chambers

**A5. Internal structures of heart**

A5.1 Valves, Septa,

**A6. Coronary circulation**

A6.1 Arterial supply

A6.2 Venous drainage

A7. Nerves supply of heart

A7.1 Parasympathetic supply

A7.2 Sympathetic supply

A8. Conducting system of heart

A9. Circulation of blood

A9.1 Systemic circulation

A9.2 Pulmonary circulation

**B. CARDIAC PHYSIOLOGY**

**30+30**

B1. Morphology and physiology of cardiac muscles

B2. Cardiac cycle

B3. Electrocardiogram & its waves

B4. Functions of atria

B5. Functions of ventricles

B6. Functions of valves

B7. Heart sounds & its physiological significance

B8. Heart rate & factors affecting it

- B9. Cardiac output & factors affecting it
- B10. Regulation of heart rate (nervous control)
- B11. Rhythmical excitation of the heart (Briefly)
- B12. S.A node
- B13. A.V node
- B14. Purkinje system
- B15. Spread of the cardiac impulse

**D. PRACTICAL on all above contents**

**100**

- D1. Receiving of patient
- D2. Introduction to Electro medical equipment
- D3. Introduction to ECG room
- D4. Maintenance of apparatus
- D5. Operation of apparatus
- D6. Application of apparatus
- D7. Preparation of patient
- D8. ECG lab-eling
- D9. Record keeping

**RECOMMENDED BOOKS:**

1. Current Diagnosis and Treatment in Cardiology by Michael H. Crawford
2. Echo Made Easy by Sam Khaddoura by Elsevier Sciences
3. Diseases of the Heart by Desmond G. Julian
4. Electronic Fetal Hearth Monitoring A practical Guide by RenuMisra
5. Principles of Electrocardiography by Dr. Muhammad Ilyas
6. Pharmacology by Shamim

**REFERENCE BOOKS:**

1. Robbin Pathology by Cortan Kumar by WB Saunders
2. Treatment of Heart Disease by James T. Willerson
3. The ECG in Practice by John R Hampton

**Course Title: CARDIOLOGY TECHNIQUES-II AND CLINICAL PRACTICE**

**Study Hours: 60+160**

**Paper : 2**

**Term : 3<sup>rd</sup>**

**Marks**

**Theory: 120**

**Practical: 30**

**Time: 3Hrs**

**Course contents**

**STUDY HOURS  
(THEORY+PRACTICAL)**

**A. CARDIAC PHARMACOLOGY**

**60+60**

(Brief Introduction)

A1. Vasodilators

A2. Beta blockers

A3. ACE inhibitors

A4. Diuretics

A5. Cardiac glycosides

A6. Anti-anginal agents (Nitrates)

A7. Inotropic agents

A8. Anti coagulants

A9. Anti arrhythmic agents

**B. PRACTICAL on all above contents**

**100**

B1. Receiving of patient

B2. Introduction to Electro medical equipment

B3. Introduction to ECG room

B4. Maintenance of apparatus

B5. Operation of apparatus

B6. Application of apparatus

B7. Preparation of patient

B8. ECG lab-eling

B9. Record keeping

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