

# CURRICULUM



## DIPLOMA IN CARDIOLOGY (DIP-CARD) DEPARTMENT OF CARDIOLOGY

Peoples University of Medical & Health Sciences,  
Nawabshah, Sindh

## **DIPLOMA IN CARDIOLOGY (DIP CARD) PUMHSW, Nawabshah.**

### **STATUTES:**

Course Duration: 02 Years

### **1. REGULATIONS FOR ELIGIBILITY**

1. Every candidate must be a medical graduate possessing the degree of MBBS or equivalent recognized by PMDC.
2. He/she must be registered with PMDC. In case of foreign candidates the doctor must be registered with the medical registration authority of that country and provisionally registered with PMDC. If the candidate has received training in Pakistan then he must be registered with PMDC.
3. He /she must have completed one year house job including six months house job in medicine or allied medical specialty.
4. Candidates with two years periphery service shall be preferred but periphery service is not mandatory.
5. Final selection for diploma in cardiology would be on basis of aggregate merit in MBBS and entry test and interview.
6. In case of candidates who have attained the necessary experience in cardiology abroad. They must produce a certificate from the Head of institution or the Head of the Department that the Department has necessary infrastructure as prescribed above. They must be registered with the medical registration authority of that country.
7. Every candidate must be registered with University for two years before the date of examination.

### **2. SYLLABUS AND COURSE OF READING**

#### **PART – I**

#### **ANATOMY OF HEART AND CIRCULATION**

- a. Embryology and normal anatomy
- b. Coronary circulation.
- c. Pulmonary and systemic circulation.
- d. Autonomic Nervous system & Heart.
- e. Conduction system.

## **PHYSIOLOGY**

- a. Cardiac cycle
- b. Fetal circulation.
- c. Myocardial metabolism
- d. Coronary Circulation
- e. Pulmonary circulation
- f. Exercise physiology of heart
- g. Regulation of blood pressure
- h. Blood gases & pH.

## **PATHOLOGY**

- a. Congenital heart diseases
- b. Valvular heart diseases
- c. Ischemic heart diseases
- d. Cardiomyopathies.
- e. Lab aids and interpretation of tests

## **PHARMACOLOGY**

- a. Inotropes
- b. Diuretics
- c. Antihypertensive
- d. Vasodilators
- e. B-Blockers and other anti-anginal agents
- f. Anticoagulants
- g. ACE, ARB, Anti-arrhythmics.
- h. Digitalis and other related drugs.
- i. lipid lowering and anti diabetic drugs.

## **INVESTIGATIVE CARDIOLOGY**

- 1. Clinical approach to the cardiac patients
- 2. CVS Radiology
- 3. ECG
  - a. Normal
  - b. Ischemic heart disease
  - c. Hypertrophies
  - d. Arrhythmias
  - e. Exercise testing

4. Echocardiography
  - a. Basic principles
  - b. M – Mode
  - c. 2D
    - i. Congenital heart disease
    - ii. Valvular heart disease
    - iii. Ischemic heart disease
    - iv. Cardiomyopathies
  - d. Doppler
5. Cardiac Catheterization
  - a. Coronary heart disease
  - b. Congenital heart disease
  - c. Electrophysiology & RFA
  - d. Pacemakers and ICD.
  - e. PTMC
6. Nuclear Cardiology
7. Holter Monitoring
8. CT and MRI

## **PART – II**

### **Current guidelines for management of CAD, CHD, RHD, CARDIOMYOPATHIES, INFECTIVE ENDOCARDITIS, ARRHYTHMIAS, DYSLIPIDEMIAS.. DISEASE AND MANAGEMENT.**

1. Congenital heart disease
  - a. Assessment of congenital heart disease
  - b. Management of congenital heart disease
2. Respiratory failure type I & II
3. Rheumatic fever
4. Chronic rheumatic heart disease
  - a. Assessment of valvular disease
  - b. Mitral valve disease
  - c. Aortic valve disease
  - d. Tricuspid Valve disease
5. Surgery of valvular heart diseases
6. Chest pain syndrome
7. Acute myocardial infarction
8. Surgery for ischemic heart disease
9. Cor-pulmonale and pulmonary embolism
10. Cardiac tumors
11. Cardiomyopathies
12. Infective endocarditis
13. Hypertension

14. Management of hypertension
15. Diseases of aorta
16. BLS and ACLS.
17. Systemic disease affecting the heart
18. Heart disease in pregnancy
19. Preventive cardiology
20. Cardiac trauma
21. Coronary and post operative care
22. Cardiac surgery
23. Pre surgical cardiac evaluation.

### **3. COURSE MANDATORY ROTATIONS:**

- 6 Months CCU
- 12 Months Cardiology Ward
- 2 Months Cardiology OPD
- 3 Months Echo
- 1Month ETT and Nuclear cardiology.

1. The course of study and the outlines of examination prescribed by the Board of Postgraduate Studies as prescribed in the syllabus may be changed by the said Board and approved by the University as and when found necessary. Such change however, shall be notified at least one year before the date of commencement of the examination in which they will become effective.

### **4. EXAMINATION**

1. There shall be one examination each year.
2. There will be no supplementary examination
3. Success in examination will lead to the award of diploma in cardiology by Peoples University of Medical and Health Sciences for Women, Nawabshah.
4. The examination will be conducted in one part.
5. Training in cardiology for any other course will not be accepted as a substitute for training course in Dip Card.
8. English should be the medium of instruction and examination

### **5. REQUIREMENT TO SIT IN THE EXAMINATION**

1. Must have to attend BLS and ACLS (Advance Cardiac Life Support) course.
2. Certificate from the incharge of the Department and Director Post Graduation having completed 2 years training for diploma in cardiology.
3. Must submit certificate from the incharge of the unit that he/she was present in 6 clinical meetings and 6 journal clubs meeting.

## **6. OUTLINES OF EXAMINATION**

### **Paper-I**

- a. 75 BCQs (100 Marks).

### **Paper-II**

- a. 10 SEQs (100 Marks)

## **ORAL AND PRACTICAL**

1. TOACS: 50 marks
2. Short Cases: 75 marks
3. Long Cases: 75marks

**Grand Total: 400 marks**

TOACS will also include recognition of X – ray, Slides, Echo, Cath, ECG, CT Scan, Clinical Data and special reports.

## **7. EXAMINATION CONDUCT**

1. Examiners will be as per general policy for University for diploma examinations.
2. The question in written papers will be shared on 50% basis both for setting and marking purposes by the internal and external examiners.
3. The board of examiners shall arrange the result of written, clinical, practical and oral in a consolidated form and send it as soon as possible but not later than 7 days after the completion of examination to the controller of examination for formal declaration.
4. The minimum number of passing marks to pass this examination shall be 50% in theory component and 50% oral and practical component separately. The aggregate pass marks shall be 55%. A candidate who secures 80% marks or above shall be declared to have passed with distinction.
5. Head of the department of cardiology will be the convener of the examination.

## **8. EXAMINATION FEE**

As per general policy of University for diploma examinations.

## **9. BOOKS AND JOURNALS FOR READING.**

- a. Cardiovascular disease by Eugere Braunwald 7<sup>th</sup> Edition
- b. Textbook of Heart by Hurst
- c. Textbook of Cardiology by Erick Topal
- d. Current Cardiology

## JOURNALS

- a. Journal of College of Cardiology
- b. New England Journal of Medicine
- c. American Journal of Cardiology
- d. Journal Pakistan Cardiac Society