

DIPLOMA IN CARDIOLOGY **(DIP CARD)**

STATUTES:

Course Duration: 02 Yrs

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 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 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. Foreign institutions that follow the prescribed curriculum will be encouraged to affiliate with PGMI.
8. Every candidate must be registered with PGMI/KMU for two years before the date of examination.
9. A certificate of good standing from the head of the department of Cardiology must be obtained before applying for 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.

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. When and how to refer pt for C.angio,RFA, Surger

PART – II

Current guidelines for management of CAD, CHD, RHD, CARDIOMYOPATHIES, INFECTIVE ENDOCARDITIS,ARRATHYMIAS, 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. CPR
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

3. COURSE MANDATORY ROTATIONS:

- 6 Months CCU
- 8 Months Cardiology Ward
- 2 Months Peds Cardiology
- 2 Months Echo
- 2 Months Cath. Lab
- 1 Month ETT
- 1 Month Nuclear Technology
- 1 Month Cardiac Surgery
- 1 Month Preventive Cardiology / epidemiology

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 Syndicate of KMU 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 Khyber Medical University.
4. The examination will be conducted in one part
5. Candidate having successfully completed 2 years training and submitted the research work will be allowed to sit in exam.
6. Senior fellows BPS-18 with more than 5 years experience in a teaching cardiology unit can have one year exemption of training but will have to undergo through 1 year intensive course and present a research work.
7. 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 ACL (Advance Cardiac Life Support) course.
2. Certificate from the incharge of the department having completed 2 years training for diploma in cardiology. The certificate must also reflect that the candidate has completed the necessary research work which should be acceptable for publication in JPMI or any other journal recognized by PMDC.
3. Must submit certificate from the incharge of the unit that he/she has presented in 6 clinical meetings and 6 journal clubs and has conducted the compulsory research work.

6. OUTLINES OF EXAMINATION

Paper A

- a. Written paper in basic. Clinical and preventive cardiology.
- b. There shall be 10 short essay question of 6 marks each and MCQs of 40 marks with a total of 100 marks.
- c. Time allocated shall be 3 hours.

Paper B

- a. Written paper in interventional cardiology, guide lines and recent advances.
- b. There shall be 10 shot essay question of 6 marks each and MCQs of 10 marks with a total of 100 marks.
- c. Time allocated shall be 3 hours.

ORAL AND PRACTICAL

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| 1. | Viva Voce: | 100 marks |
| 2. | Short Cases: | 050 marks |
| 3. | Long Cases: | 050 marks |
| | Grand Total: | 200 marks |

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

7. EXAMINATION CONDUCT

1. There shall be a set of 2 cardiologists and 2 physician examiners, two from PGMI and two from an outside institution. The examiners will be selected by the controller of examinations, Khyber Medical University in consultation with the head department of cardiology.
2. The question in written papers will be shared on 50% basis both for setting and marking purposes by the internal and external examiners. However, the MCQs shall be prepared and mark by examiners from PGMI.
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 PGMI will be the convener of the examination.
6. Candidates shall be eligible for four consecutive examinations after the completion of the course.

8. EXAMINATION FEE

1. A fee of Rs.2,000/- (or whatever amount stipulated by PGMI/KMU from time to time) shall be charged for admission to the examination. The application form with admission fee should reach the controller of examination university of Peshawar not later than 30 days before commencement of examination.
2. A late fee of Rs.1,000/- shall be charged in addition to admission fee, for application submitted after the last date of submission of application forms. Provided such application form and examination fee are received not later than 15 days before the commencement of the examination. No application for examination will be accepted after that.

9. BOOKS AND JOURNALS FOR READING

BOOKS

- a. Cardiovascular disease by Eugere Braunwald 7th 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