DIPLOMA CLINICAL PATHOLOGY (DCP)

(Course Duration 2 years)

***1-24 General Statutes and Regulations:***

**1**. The course shall consist of instructions and training in clinical pathology lasting for two years.

 The examination shall be held once a year.

 The oral and practical parts of the examination shall be held in the Department of clinical Pathology, Postgraduate Medical Institute, Peshawar.

2. **Eligibility Criteria:**

A. Every candidate must be a medical graduate possessing the degree of MBBS or equivalent recognized by PMDC.

B. He/She must be registered with PMDC. Incase of foreign candidate, the doctor must be registered with the medical registration authority of that country. If the candidate has received training in Pakistan then he must be registered with PMDC.

C. He/She must have completed one year house job including six months house job in medicine or allied.

D. Every candidate must be registered with the PGMI/Khyber Medical University, Peshawar at least two years before the date of examination.

**3.** The following subjects shall be taught in the course :-

1. **Morbid Anatomy and Histopathology**: Study of Systematic Pathology Histological Techniques, Cutting and Staining, Exfoliative Cytology and Staining, Museum Mounting and Post-mortem, Histo-Pathological and Cytological Diagnosis.
2. **Microbiology and Serology**: Bacteriological Techniques, Staining, Cultivation, Agglutination tests, Care of Laboratory Animals, Systematic study of Bacteria, Bacteriology of Water and Mild, Sensitivity of Bacteria to various Drugs, Immunology / Serology; Study of Immunological Disorders and Diagnostic Methods.
3. **Chemical Pathology**: Theory and Practice of Chemical Investigations of Blood, Urine, C.S.F., other Body Fluids and Excreta; Biochemical Investigations for Biochemical Disorders, Special Techniques and Tests of Functions of various organs and working knowledge of chemistry analyzer.
4. **Haematology** including Blood Banking: Study of Erythropoesis and Haemotological Disorders, Basic Hematological Procedures, Morphological Hematology, Investigations of all types of Anemia, Hemorrhagic Disorders and Leukemia, Blood Groups and Blood group Anti-bodies, Rh.grouping and Cross Matching Tests; Bone Marrow Aspiration, Staining and Examination and working knowledge of haematology analyzer and coagulation analyzer.

3. The DCP course Incharge shall assign each candidate a research project in any chosen specialty approved by the Incharge of that specialty in first year and he/she shall complete and submit his / her project three months before the examination.

4. The candidates of DCP shall be working in the different disciplines of Pathology as per following schedule:

 a. Haematology / Blood banking 6 ½ months

 b Chemical Pathology 6 ½ months

 c. Microbiology 6 months

 d. Histopathology 5 months

**4. EXAMINATION:**

1. There shall be a total of four written papers, one in each subject. There shall be five short essay questions **(SEQ**) in each paper (all questions compulsory) and shall carry maximum of 75 marks. The duration of each paper shall be three hours.
2. The practical and oral examination shall be conducted separately in each of the four subjects, and shall include the examination of pathological material followed by written report and Viva Voce. The Practical and Oral examination in each subject shall carry maximum of 75 marks.

**5.** Outline of the examination shall be as follow:-

**i** **Morbid anatomy and Histopathology:**

1. One written paper (paper-A) (SEQ) = 75 marks
2. Practical and oral examination. = 75 marks

 Total = 150 marks

**ii.** **Microbiology and Serology :**

 a. One written paper (Paper B) (SEQ) = 75 marks

 b. Practical and Oral examination = 75 marks

 Total = 150 marks

**iii**. **Chemical Pathology:**

1. One written Paper (Paper-C) (SEQ) = 75 marks
2. Practical & Oral Examination = 75 marks

 Total = 150 marks

**iv. Hematology including Blood Banking**

 a One Written Paper (Paper-D) (SEQ) = 75 marks

 b. Practical and oral examination = 75 marks

 Total = 150 marks

**v.** Viva on a Research Project in

 any chosen specialty = 50 marks

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 Grand total = 650 marks

Pass marks shall be 50% for written exams and 50% for viva and 55% aggregate.

Time allowed for written papers is three hours

**6.** A candidate shall enter the examination on the production of the following documents signed by the Dean, Postgraduate Medical Institute, Peshawar.

1. That he/she has attended at the minimum 80% of the DCP course.
2. That he/she has performed procedures and tests in each of the disciplines of Clinical Pathology to the satisfaction of his/her Supervisor and Head of the Pathology Department as specified in the schedule.
3. That he/she has completed a research project allotted to him/ her by the Supervisor / Head of the Department in any one of the four sub-specialties.

**7. RECOMMENDED BOOKS AND JOURNALS**

 **BOOKS OF HISTOPATHOLOGY**

* 1. Robbins Pathological basis of disease. By Ramzi S.Cortan. Vinay Kumar Stanley L. Robbins.
	2. General Pathology. J.B. Watter, M.S Israel
	3. Text book of histopathology : Maximow and Bloom

**JOURNALS OF HISTOPATHOLOGY**

1. American Journal of Surgical Pathology.
2. Achieves of Pathology.
3. International Journal of Cancer.

 **BOOKS OF HAEMATOLOGY**

1. Practical Hematology: Dacie, J.V
2. Clinical Hematology: Wintrobe M. Authors. Lee,Boggs, Bithe Athens.
3. Postgraduate Hematology: A.V. Hoffbrand
4. Blood: Authors, James, H Jandi
5. Clinical Hematology in Medical Practice D.Gruchy
6. Hematology: Authors, Williams, beutler, Beuler, Erslev Liehman.

**JOURNAL OF HAEMATOLOGY**

1. British Journal of Haematology
2. Blood

**BOOKS OF PATHOLOGY**

1. Practical Clinical Biochemistry 1st and 2nd Edition by Harold Varley
2. Clinical Chemistry in Diagnosis and Treatment By John F. Zilva.
3. Microanalysis in Medical Biochemistry, By I.D.P Wooton
4. ABC of Interpretive Laboratory Data by Seymour Bakerman.
5. Lecture Notes on Clinical Chemistry By L.G Whitby
6. Lynch’s Medical Laboratory Technology by Raphael
7. A Short Text Book of Chemical Pathology by D.N Baron
8. Clinical Chemistry by Teitz.
9. A Text Book of Biochemistry International Edition by Lubert Stryer.

**BOOKS OF MICROBIOLOGY AND IMMUNOLOGY**

1. Medical Microbiology:

 By Jawetz. Melnick and Adlberg’s.

1. Medical Microbiology and Immunology:

By Warren E. Levinson, Ernest Jawetz.

1. Bailey and Scott’s Diagnostic Microbiology:

 By Syney M. Finegold, William J. Martin.

1. Zinssev Microbiology:

 By Wolfgains K. Joklik, Hiladap While H. & D. Bernard Amos.

1. Manual of Clinical Microbiology:

 By Edwin H. Lennette, Albert Baloons and William J. Hansler

1. Essential Immunology:

By Ivan Roitt

1. Mackie and McCartney, Practical Medical Microbiology :

 By J.G. Collce, J.P Duguid, A.G Fraser
and B.P. Marmocose.

**JOURNALS OF MICROBIOLOGY AND IMMUNOLOGY**

1. American Journal of clinical Microbiology.
2. Journal of P.M.R.C
3. Journal of Postgraduate Medical Institute, Peshawar.