Curriculum

Diploma In Clinical Pathology (DCP)

Bangabandhu Sheikh Mujib Medical University

Shahbagh, Dhaka.

CONTENTS

1. Name of the Course : Diploma of Clinical Pathology (DCP)

2. Duration : Two academic Years

3. Date of Commencement : July of each year

4. Aims and objectives :

a. To provide sufficient training in the field of laboratory Medicine

b. To develop skill manpower in laboratory science

c. To organize and management of a laboratory

5. Eligibility for admission :

a. MBBS or its equivalent degree recognized by BMDC

b. Minimum two year after passing MBBS of its equivalent degree recognized by BMDC

6. Course content :

Paper : I	**Group – A**	Clinical pathology
	Group – B	Parasitology & Diagnostic Immunology
Paper : II	**Group – A**	Clinical Biochemistry
	Group – B	Haematology & Transfusion Medicine
Paper : III	**Group – A**	General Pathology
	Group – B	Clinical Microbiology

7. Training rotations:

Self department

16 months (4 months at the beginning and 12 months at the end)

Rotation:

Microbiology Dept: 03 months

Biochemistry Dept: 02 months

Haematology Dept/ Pathology Department: 02 months

Transfusion Medicine: 01 month

8. Summative Examination:

8.1. Summative examination will be held at the end of the 2 year and then every July and January. The date will be determined by the university.

8.2. Three papers on written examination. Each paper will be divided into Group A & Group B

8.3. Written question: In each paper there will be four questions. Two of them will be long Essay type. Two will of SAQ; five in each question.

8.4. Clinical-practical

8.5. Oral: There will be two boards. In each board there will be two examiners. Fifteen minutes for each board equally divided into two examines. There will be 4 examiners; Associated professor and above. 50 % of the examiners will be external.

8.6. To pass, the candidate have to secure at least 60% marks in each of three components of written (three paper combindly), clinical–practical and oral examination

Examination format:

Components of examination	Paper	Marks allotted	Time	Pass marks
a. Written	Paper- I	100	3 hours	
	Paper- II	100	3 hours	
	Paper- III	100	3 hours	
	Total	**300**		**180**
b. Clinical & Practical		200		120
c. Oral		100		60
Total		**600**		**360**

9. Formative assessment:

There will formative assessment at the end of each six months of training by the supervisor/ department or by the institute. There satisfactory certificates will be pre-requisite along with others for appearing in the final exit examination. The last six month will end with summative examination.

10. Procedural skill:

To developed skill in different lab procedure like- Hb estimation, ESR, PCV, Glucose estimation, Benjonce protein estimation, fat estimation.

11. Course Contents

Paper- I

(Group A-Clinical Pathology, Group B- Parasitology & Diagnostic Immunology)

(Group – A)

Clinical Pathology

Stool for R/E & special examination, Urine R/E, & special examination including phase contrast microscopy. Haemoparasite

C.S.F/ others body fluid / Jt. Fluid for R/E & Polarize microscopy. Semen for complete analysis.

Staining, Gram's Albert's & Z. N. Stain.

Routine examination of pus, throat swab, vaginal swab, prostatic smear/Urethral smear. Tumour Markers- Method & interpretation.

(Group-B)

Parasitology & Diagnostic Immunology

Common Protozoa, Nematodes, Cestodes and Trematodes

Laboratory diagnosis of common parasitic diseases.

Definition, classification of common viruses.

Laboratory diagnosis of common viral diseases e.g. RNA, DNA,

Hepatitis, HIV & other common viral diseases.

Antigen, antibody, Complement, antibody / cell mediated immunity, Hypersensitivity.

Antigen- antibody reactions, precipitation test (VDRL) & ASO Titre.

Agglutination reaction (Widal test, TPHA, RA test) and Complement fixation test.

PCR

Paper-II

(Group A-Clinical Biochemistry, Group B-Haematology & Transfusion Medicine,)

(Group-A)

Clinical Biochemistry

General: PH, buffers, acid base balance, volumetric. Colorimetry / Spectophotometry / Gas analysis/ Electrolyte, Liver function. Renal function,

Gastric function,

Solutions, Metabolisms

Enzyme, Coenzyme & isoenzyme, Enzyme of Clinical importance

Methods: Blood sugar, Cholesterol, Bilirubin, Urea, Proteins, Uric acid, Creatinine, Amylase, Glucose tolerance test (GTT), Liver function test, Creatinine clearance test.

General – PH, buffers, colloid & cyrtellid, solution.

Applied- Metabolism - carbohydrate, lipid profile, DM, Acid-base balance

Enzyme, Coenzyme & isoenzyme, Enzyme of Clinical importance

Technique - Colorimetry / Spectophotometry / ELISA / Blood Gas analysis / Electrolyte / HPLC / Electrophoresis

Normal value, estimation procedure and interpretation, blood sugar

(Group-B)

Haematology & Transfusion Medicine

Haematology:

Haemopoeisis

Anaemias-Iron deficiency / Combined deficiency/ Megaloblastic

Haemoglobinopathies / Haemolytic Anaemias, Haemorrhagic disorders, Haematologic malignancies-leukaemias, Paraprotaenimias - Multiple Myeloma.

Estimation of Haemoglobin, E.S.R, Blood film. Red cells indices- HCT, MCV, MCH MCHC Total & differential leucocyte count. TC, Platelet/ RBC,Reticulocyte count.

Bone marrow examination, Cytochemical staining, LE cell preparation.

Flowcytometry/ electrophoresis

Transfusion Medicine

Blood grouping and Rh factor. Selection and screening of donor. Compatibility test- Cross maching- Coombs test., Transfusion reactions.

Paper-III

(Group A-General Pathology, Group B-Clinical Microbiology)

(Group-A)

General Pathology

Cellular adaptation, Inflammation, Necrosis, Tumors, Haemodynamic Change, Infectious diseases, Immunological disease, Medical Genetics (in brief)

Lectures Tutorial and practical classes.

Routine histopathological technique demonstration, Cytopathology technique & utility.

Frozen section-technique & utility.

Common cytopatholigcal & histopathological stains.

(Group-B)

Clinical Microbiology

Bacteriology

General- Sterilization

Systemic- Staphylococcus, Streptococcus

- Pneumococcus, Corynebacterium, Mycobacterium, Neisseria
- Clostridium, Salmonella, Shigella, Vibrio, E-coli
- T. Pallidum

Staining Principle: Gram, Albert's, AFB etc.

Cultivation- Routine diagnostic medias- Culture preparation, Sterilization, Inoculation, Special medias and utility.

Isolation of bacteria from unknown specimens like T/S, Rectal swab, stool.

Sensitivity test- Demonstration of sensitivities of bacteria to antibiotics.

Diagnosis of tuberculosis, typhoid fever and syphilis.

Mycology – classification of Fungus, Candida, Dermatophytes with demonstration.

15. Eligibility Criteria for eligibility for final examination:

a) Two year in-course training
b) 3 satisfactory 6 monthly report of formative assessment
c) 75% attendance in lectures & other departmental academic activities
d) Satisfactorily completed log book

BOOKS RECOMMENDED

1. Robbins Pathologic Basics of Disease.
2. Henry's Clinical Diagnosis & Management by Laboratory Methods
3. Degruchy's Clinical Haematology in Medical Practice
4. Dacie, Practical Haematology
5. Medical Microbiology, Jawets
6. Medical Microbiology, Greenwood efal.
7. Medical Laboratory Technology, Ramnuk,Sood

8. Modern Medical Microbiology, M. R. Chowdhury
9. Practical Pathology & Microbiology, K.A. Khaleque
10. Essential Immunology, Ivan Roitt
11. Parasitology, K. D. Chaterjee,
12. Lippincott's Illustrated Reviews Biochemistry
13. Harper's Bio-chemistry
14. Walter & Israel General Pathology
15. Manual For Training of Laboratory Technician in Bangladesh, Clinical Pathology Department BSMMU & WHO-2006.
16. Postgraduate Haematology, Av Hoffbrand and S M Leuis
17. Colour atlas of Clinical Haematology, A Victor Hoffbrand, John E Pettit.
18. VARI EY H Practical Clinical Bio- chemistry, Butterworth, London
19. Wintrobes Haematology

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Shahbag, Dhaka

Diploma trainee's Block progress report

Name of the trainee : Session :

Name of the course : Reg. No:

Name of the institute :

Period of block :

Performance	Poor	Satisfactory	Good	Excellent
Written*				
Clinical-Practical*				
Oral*				
Attendance*				
Attitude				

* Poor: <50%, Satisfactory: ≥50-60%, Good: >60-75%, Excellent : >75%

Note: "Poor" grade in more than two performance during a particular block means deficient training and also cause disqualification for appearing in the final examination unless training in particular block is complete.

Signature: .....
Head of the Department
(Seal)

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