

**5. PRACTICAL PROFESSIONAL TRAINING – I  
(Structured and Supervised)  
AND  
6. PRACTICAL PROFESSIONAL TRAINING – II  
(Structured and Supervised)**

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**OBJECTIVE**

The objective of providing professional training is to:

1. Provide real life experience by creating necessary awareness regarding use of various types of diagnostic equipment, particularly sophisticated ones which are used in the field of medical laboratory technology.
2. Create confidence in the students to work in world of work by developing practical skills pertaining to laboratory management and diagnostic skills in the field of clinical haematology, transfusion medicine blood banking, clinical biochemistry, clinical microbiology, histopathology and cytology and ensuring laboratory safety and quality assurance.
3. Develop appreciation regarding size and scale of operations, environment and other related aspects like value of team work, interpersonal relations and professional ethics in the field of medical laboratory technology.
4. Develop necessary traits for starting small clinical laboratories as per requirements.

**SELECTION OF TRAINING PLACES**

The institute offering diploma programme in Medical Laboratory Technology should establish contact/rapport by personal visit to following types of organizations:

1. Medical Colleges/Research institutions
2. Civil Hospitals at District Headquarters having well equipped laboratory
3. Hospitals in private sector
4. Well established clinical laboratories being run by a qualified person

**LIST OF PRACTICALS**

List of exercises is suggested below which should be carried out during 5<sup>th</sup> semester and 6<sup>th</sup> semester.

During 5<sup>th</sup> Semester

1. Preparation of various anticoagulants/containers
2. Collection of various clinical samples
3. Haemoglobin estimation

4. TLC, DLC, ESR, PCV, BT & CT
5. Absolute Eosinophil Count
6. APTT/PTTK
7. Prothrombin Time & calculation of INR
8. Blood Sugar – Random/Fasting/PP
9. GTT/ST
10. Urine – Complete examination
11. Stool – Complete examination
12. RA/RF factor
13. ABO and Rh blood grouping
14. Widal test
15. VDRL test
16. Cleaning of glassware
17. Disposal of Medical wastes (use of bags)
18. Staining of blood film
19. H&E staining
20. Spotting

During 6<sup>th</sup> Semester

1. Reticulocyte count
2. Platelet count
3. Peripheral blood film examination
4. Sputum examination for AFB
5. Serum calcium
6. CSF examination
7. Lipid profile
8. Liver function test
9. Renal function test
10. Stool for occult blood
11. Urine for culture and sensitivity
12. Blood for culture and sensitivity
13. Semen culture
14. Pus culture and sensitivity
15. Staining of smears by various staining procedures
16. Biochemical testing
17. HIV Test
18. Hbs Ag test
19. ASO
20. CRP
21. Pregnancy test
22. Spotting

In addition to the above, students are expected to learn various tests being conducted at the training centre, where ever they are undergoing training.

**Note:**

1. The Principal of the institute where diploma programme in Medical Laboratory Technology is being offered, with the help of Directorate of Technical Education/Secretary, Technical Education may approach Director, Health Services/Director, Medical Education/Secretary, Health to collaborate in offering structured and supervised project work/practical training of students in above organizations. It will be worthwhile to sign a "Memorandum of Understanding" regarding the involvement of students in undergoing practical training
2. The Principal of the institute may also approach Regional Apprenticeship Adviser (Northern Region), Kanpur to provide training seats under Apprenticeship Act to the students

**METHODOLOGY OF ORGANIZING PROFESSIONAL TRAINING**

Each concerned teacher will be responsible for a group of minimum 10 students in respective speciality to plan, supervise and monitor the progress when placed in different organizations for practical training for minimum 8 hrs/week. For this purpose, necessary recurring expenditure for making payment of TA/DA to the faculty of institute and the experts may be worked out by respective institutes, keeping in view, number of visits and the distances involved in such travelling. The concerned teacher will have to continuously interact with training centres to monitor the progress of the students

**EVALUATION OF STUDENTS FOR PROFESSIONAL TRAINING**

Professional training will have 800 marks. Out of which 300 marks will be awarded by the organization in consultation with concerned teacher where placed for practical/professional training and 500 marks are for (Board) external examination. The criteria for internal assessment will be as under:

<b>a) Criteria for internal assessment by organization where placed for practical/professional training</b>	<b>Weightage (%)</b>
1. Attendance/Punctuality	10
2. Proficiency in conducting laboratory test	30
3. Preparation of portfolio based on day to day work done in various laboratories	20
4. Initiative/responsibility exhibited	10
5. Interpersonal relations	10
6. Behaviour/attitude	10
7. Maintenance of equipment and work place	10

## **GENERAL GUIDELINES**

- (i) The students are expected to prepare practical record book as per given list of the experiments. Besides, they can also add other experiments as well.
- (ii) External examiner along with internal faculty should evaluate the student's performance through viva voice/spotting/performance and synopsis: