PGDMLT-2004 A: BLOOD BANKING AND HISTO-CYTOLOGICAL TECHNIQUES

Semester: II	
Course (subject) Code	**PGDMLT 2004 A**
Subject Title	**Blood Banking and Histo-Cytological Techniques**
Course Type	Elective
Teaching Time	15×4=60 Hours
Subject Outcome	At the end of the course, the students will get knowledge of • Know Various Blood group systems • Learn about Blood Centre and Blood Banking techniques (Transfusion Medicine) • Tissue processing method, Microtomy and staining of tissue sections • Specimen collection, smear preparation and staining for cytological examination

Course Content:

Unit No.	Content	Teaching Hours
Unit-1	**Blood Group System**	**15 Hr.**
1.1	ABO Blood group System	
1.2	Rh Blood group System	
1.3	Techniques of ABO and Rh grouping	
1.4	Other Blood Group System	
Unit-2	**Blood Collection and Component Preparation**	**15 Hr.**
2.1	Screening and Phlebotomy of Donor	
2.2	Storage and Transportation of Doner	
2.3	Mandatory Screening Tests: HIV-1 & HIV-2, HBsAg, HCV, RPR and Malaria	
2.4	Component Preparation: RCC, FFP, Cryoprecipitate, Platelet Concentrate, Single Donor Platelet	
Unit-3	**Compatibility Testing and Transfusion Reaction**	**15 Hr.**
3.1	Compatibility Testing	
3.2	Selection of Blood components for Transfusion	
3.3	Transfusion reaction: Types and Investigation	
3.4	Mechanism and Investigation of HDN	
Unit-4	**Histological & Cytological Techniques**	**15 Hr.**
4.1	Tissue Processing, Wax Impregnation and Embedding	
4.2	Types of Microtomes	
4.3	H & E staining	
4.4	FNAC	

Reference Books:

Sr. No.	Title/Edition	Authors	Publisher
1	Compendium of Transfusion Medicine, Practice of Safe Blood Transfusion	R. N. Makroo	Career Expert Publications
2	Technical Manual, 2014 (Online PDF)	Martha Rae Coombs et. al	American Association of Blood Banks
3	Blood Transfusion in Clinical Medicine. 12th edition,	PL Mollison CP Engelfriet ContrerasMarcela	Blackwell Science
4	Essential of Blood Banking and Transfusion Medicine/2nd	Ganga S Pilli	CBS Publishers and Distributors PVT LTD
5	Transfusion Medicine Technical Manual (Online PDF)	Saran R. K	Directorate General of Health Service, Ministry of Health & Family Welfare
6	Textbook of MLT/ 3rd	Godkar P. B	Bhalani Publications.
7	Medical Laboratory Science: Theory & Practice	J. Ochei A. Kolhatkar	Mc Graw Hill Education (India) Private Limited
8	Techniques of Histopathology and Cytopathology	Sadhana Vishwakarma	Jaypee Brothers
9	Textbook of Pathology/ 5th	Mohan H.	Jaypee Brothers Medical publishers