

# Lesson plan

**Discipline** : **DMLT**

**Semester** : **3rd**

**Subject** : **Haematology III**

**Lesson Plan Duration:** **15 weeks (from Aug, 2024 )**

**Work load ( Lecture / practical ) per week ( n hours) = Lecture=3, Practical=6**

WORK	THEORY		Practical	
	Lecture Day	Topic (Including assignment/test}	Practical Day	Topic
1 <sup>st</sup>	1	Introduction to Erythrocyte sedimentation rate (ESR	L1	ESR estimations by wintrobe method in blood sample
	2	Westergren's method of ESR estimation		
	3	Wintrob's method of ESR estimation		
2 <sup>nd</sup>	4	Introduction to packed cell volume (PCV)	L2	ESR estimations by westergren method in blood sample
	5	Macrohaematocrite method of PCV estimation		
	6	Microhaematocrite method of PCV estimation		
3 <sup>rd</sup>	7	Merits and Demerits of ESR & PCV estimation	L3	Determination of PCV in blood by Macro Methods
	8	Factors involved in ESR& Interpretation of results		
	9	Clinical Significance of ESR &PCV estimation		
4 <sup>th</sup>	10	Assignment	L4	Determination of PCV in blood Micro Methods
	11	Test		
	12	Introduction to Red Cell Indices		
5 <sup>th</sup>	13	Definition, reference range of MCV	L5	Counting of Reticulocyte in blood
	14	Calculation and interpretation of MCV		
	15	Definition, reference range of MCH		
6 <sup>th</sup>	16	Calculation and interpretation of MCH	L6	To perform red cell fragility test on blood by osmotic fragility method
	17	Definition, reference range of MCHC		
	18	Calculation and interpretation of MCHC		
7 <sup>th</sup>	19	Assignment	L7	To perform red cell fragility test on blood by mechanical fragility method
	20	Introduction to Supravital stain and reticulocyte counting		
	21	Principle and procedure of staining		

		reticulocytes		
8 <sup>th</sup>	22	Calculation, Reference values and interpretation of Reticulocytes count	L8	To perform Sickling test on blood by solubility test
	23	Physiological Values of Hb		
	24	Physiological Values of PCV		
9 <sup>th</sup>	25	Physiological Values of TLC	L9	To perform Sickling test on blood by peripheral blood film
	26	Physiological Values of Platelet count		
	27	Definition & Symptoms of Anaemias		
10 <sup>th</sup>	28	Introduction to aetiological classification of Anaemia	L10	Estimation of foetal haemoglobin by alkali denaturation test
	29	Introduction to morphological classification of Anaemia		
	30	Haemorrhagic & Dyshaemorrhagic anaemia in detail		
11 <sup>th</sup>	31	Microcytic anemia & Megaloblastic anemia	L11	Estimation of plasma haemoglobin by Sahli's method
	32	Haemolytic Anaemia in Detail		
	33	Aplastic anemia in Detail		
12 <sup>th</sup>	34	Laboratory diagnosis of: Iron deficiency anaemia	L12	Estimation of plasma haemoglobin by Cyanmethemoglobin method
	35	Laboratory diagnosis of Megaloblastic anaemia		
	36	Laboratory diagnosis of Haemolytic anaemias		
13 <sup>th</sup>	37	Laboratory diagnosis of sickle cell anaemia & thalassaemia	L13	Estimation of plasma haemoglobin by Oxyhemoglobin method
	38	Laboratory diagnosis of Aplastic anaemia		
	39	Assignment		
14 <sup>th</sup>	40	Test	L14	Estimation of plasma haemoglobin by Alkaline hematin method
	41	Introduction to Red cell fragility		
	42	Mechanical erythrocyte fragility test		
15 <sup>th</sup>	43	Osmotic erythrocyte fragility test	L15	Estimation of and G6PD by Methylene Blue Reduction Test
	44	Interpretation & Significance of Red Cell Fragility		
	45	Assignment		