Lesson plan

Name of the Faculty : Ms. Pratima Saini
Discipline : DMLT
Semester : 1st
Subject : Haematology-I
Lession Plan Duration: From October 2021
Work load (Lecture / practical) per week (n hours) = Lecture=3, Practical=6

WORK	THEORY		PRACTICAL	
	Lecture Day	Topic (Including assignment/test}	Practical Day	Topic
1st	1	Introduction to haematology	L1	Demonstration of various parts of centrifuge
	2	Various glassware used in haematology labs		
	3	Various plasticware used in haematology labs		
2nd	4	Hb tube, Hbpipette, RBC pipette, WBC pipette)	L2	Functioning and care of Centrifuge
	5	Introduction to Apparatus and Instruments used in hematology lab		
	6	Introduction to Water bath		
3rd	7	Introduction to Blood cell counter	L3	Demonstration of various parts of microscope
	8	Various types of Blood cell counter		
	9	Blood Mixer		
4th	10	Introduction to Centrifuge	L4	Functioning and care of microscope
	11	Various types of centrifuge		
	12	Assignment		
5th	13	Introduction to Haemopoeisis	L5	Preparation of ACD (Acid Citrate Dextrose)
	14	Introduction of Erythropoiesis		
	15	Different Stages of Erythropoiesis		
6th	16	Introduction to leucopoeisis	L6	Preparation of CPD (Citrate Phosphate Dextrose)
	17	Different Stages of leucopoeisis		
	18	Introduction to thrombopoeisis		
7th	19	Different Stages of thrombopoeisis	L7	Preparation of CPDA (Citrate Phosphate Dextrose Adenine)
	20	Definition, composition of Blood		
	21	functions of blood		
8th	22	Assignment	L8	Collection of venous and

	23	Definition and various types of anticoagulants		capillary blood
	24	Mode of action and preparation of Anticoagulants		
9th	25	Merits and demerits of anticoagulants	L9	Preparation of Giemsa stain
	26	Collection and preservation of blood		
	27	Collection of blood; by venous method		
10th	28	Collection of blood by capillary method	L10	Preparation of Leishman's stain
	29	Various equipment used for collection of blood samples		
	30	Safety measures at the time of sampling and collection		
11th	31	Preservation of processed blood samples in hematology	L11	Preparation of Wright stain
	32	Introduction to Diluting fluid		
	33	Uses, preparation and composition of Hb Diluting fluid		
12th	34	Uses, preparation and composition of TLC Diluting fluid	L12	Preparation of peripheral blood film
	35	Uses, preparation and composition of Platelets Diluting fluid		
	36	Uses, preparation and composition of RBC Diluting fluid		
13th	37	Introduction to Romanowsky stains	L13	To stain a peripheral blood film by Giemsa stain
	38	Theory and preparation of leishman stain		
	39	Theory and preparation of Giemsa stain		
14th	40	Theory and preparation of Wright stain	L14	To stain a peripheral blood film by Leishman's stain
	41	Choice of slide and spreader and preparation of blood film		
	42	Characteristics of good film preparation		
15th	43	Staining procedure of Romanowsky stains	L15	To stain a peripheral blood film by Wright stain
	44	Effects of pH on staining		
	45	Assignment		
16th	1	Introduction to Haemoglobinometry	1st	L1 : Preparation of perpheral blood flim
	2	Formation of Haemoglobin		L2 : Preparation of Leishman stain
	3	Function of Hb	2nd	L3 : Preparation of Giemsa stain
17th	4	Degradation of Hb		L4 : Preparation of thin smear

	5	Types of Hb	3rd	L5 : : Preparation of thik smear
	6	Complexes of Hb		L6 : Hb Estimation by Sahli's method
18th	7	Principles & procedure of Hb estimation by Sahli's Method	4th	L7 : Hb Estimation by Oxy-haemoglobin method
	8	Specific reference & clinical significance Sahli's Method		L8 : Hb Estimation by cyanmethaemoglobin method
	9	Principles & procedure of Hb estimation by cyanmethaemoglobin Method	5th	L9 :Counting of RBC by cell counter
19th	10	Specific reference & clinical significance of cyanmethaemoglobin method		L10 : Counting of WBC by cell counter
	11	Assignment	6th	L11 : Counting of Platelets by cell counter
	12	Test		L12 : Counting of RBC by Neubauer hamber
20th	13	Introduction to Haempcytometry		L13 : Counting of WBC by naubauer chamber
	14	Introduction to Neubauer Chamber	7th	L14 : Counting of Platelets by naubauer chamber
	15	Introduction to rosenthal Chamber	8th	L15 : Absolute eosinophil Counting
21st	16	Introduction to Buerker counting Chamber		L16 : Study the morphology of normal RBC by Leishman stain
	17	Principles & procedure of RBC Counting	9th	L17 : Study the morphology of normal WBC by Leishman stain
	18	Calculations, Reference values of RBC		L18 : Study the morphology of normal RBC by Giemsa stain
22nd	19	Principles & procedure of WBC counting	10th	L19 : Study the morphology of normal WBC by Giemsa stain
	20	Calculations, Reference values of WBC counting		L20 : Study the morphology of abnormal RBC by Leishman stain
	21	Principles & procedure of Platelets counting	11th	L21 : Study the morphology of abnormal RBC by Giemsa stain
23rd	22	Calculations, Reference values of Platelets counting		L22 : Study the morphology of abnormal WBC by Leishman stain
	23	Errors involved in the Haemocytometry	12th	L23 : Study the morphology of abnormal WBC by Giemsa stain
	24	Errors minimize involved in Haemocytometry		L24 : Study the morphology of normal Platelets by Leishman stain
24th	25	Clinical significance of RBC, WBC, Platelets counting	13th	L25 : Study the morphology of normal Platelets by Giemsa stain

	26	Assignment		L26 : Study the morphology of normal RBC by Field stain
	27	Test	14th	L27 : Study the morphology of normal WBC by Field stain
25th	28	Introduction to differential Leucocytes		L28 : Study the morphology of normal Platelets by Field stain
	29	Preparation of thin & thick film	15th	L29 : Study the morphology of abnormal RBC by Field stain
	30	Staining of blood film by Leishman stain		L30 : Study the morphology of abnormal WBC by Field stain
26th	31	Staining of blood film by Giemsa stain		
	32	Staining of blood film by Field stain		
	33	Calculation & performance of DLC		
27th	34	Normal Values & significance of DLC counting		
	35	Assignment		
	36	Test		
28th	37	Study the morphology of normal RBC&WBC		
	38	Study the morphology of abnormal RBC&WBC		
	39	Study the morphology of normal & abnormal Platelets		
29th	40	Introduction to Quality Assurance in Haematology		
	41	Accuracy & precision in Quality Assurance		
	42	Various types of blood cell counters		
30th	43	Principle & operations of automated blood cell counter		
	44	Principle & operation of coulter counter		
	45	Assignment of unit 5th & 6th		