LESSON PLAN

NAME OF FACULTY : Deepak Rawat

DISCIPLINE : DMLT

SEMESTER : 4th

SUBJECT : Histology and cytology

LESSON PLAN DURATION : 15 Weeks (from january , 2018 to April, 2018)

Work Load Per week : Lectures- 4, Practical -3

WEEK	THEORY		PRACTICAL	
	LECTURE DAY	TOPIC (ASSINGNMET/TEST)	PRACTICAL DAY (Each day for 3 hours)	TOPIC
1st	1	light microscope introduction	1st	Demonstration of various parts of light microscope (Mechanical)
	2	Principles of light microscope		
	3	Various parts of microscope		
	4	Uses of microscope		
2nd	5	Cleaning and maintenance of microscope	2nd	Demonstration of various parts of light microscope (Optical)
	6	Various attachments of compound microscope		
	7	principle of - Polarizing microscopy		
	8	principle of Dark field microscopy		
3rd	9	principle of Phase contrast microscopy	3rd	Demonstration of cryostat
	10	principle of Fluorescent microscopy		
	11	principle of Electron microscopy		
	12	Stain Introduction		

4th	13	Different Stains	4th	Processing of tissue for frozen section
	14	Principle, significance and interpretation of PAS (Periodic Acid Schiff's Reagent) Stain		
	15	Principle, significance and interpretation of PAS (Periodic Acid Schiff's Reagent) Stain		
	16	Principle, significance and interpretation of Silver impergnation stain – Reticulin fibre		
5th	17	Principle, significance and interpretation of Silver impergnation stain – Reticulin fibre	5th	Staining and mounting of frozen section using H&E stain (rapid method), Oil Red "O".
	18	Principle, significance and interpretation of Masson's trichrome stain		
	19	Principle, significance and interpretation of Masson's trichrome stain		
	20	Principle, significance and interpretation of Oil Red O – fat		
6th	21	Principle, significance and interpretation of Gram's stain – Gram +ve		Preparation of various mounting reagents for museum specimens
	22	Principle,		

		significance and interpretation of Gram's stain – Gram -ve		
	23	Assignment of unit 1,2		
	24	Test of unit 1,2		
7th	25	Decalcification introduction	7th	Demonstration and care of autopsy instruments
	26	Process of decalcification		
	27	Various types of decalcifying methods		
	28	mechanism, advantage, disadvantage and applications of different method		
8th	29	Assessment of decalcification	8th	Demonstration of malignant cell
	30	Revision		
	31	Reception and processing of frozen tissue		
	32	Freezing microtome and cryostat		
9th	33	Advantages and dis-advantages of freezing microtome and cryostat	9th	Preparation of dry smear
	34	Working, care, maintenance of freezing microtome and cryostat		
	35	Frozen section cutting		
	36	Staining - Rapid H&E - Fat stain		
10th	37	Mounting of frozen section	10th	Preparation of wet smear
	38	Test and assignment of unit 3,4		
	39	Introduction to museum		

	40	importance of museum		
11th	41	importance of museum	11th	To perform Pap stain
	42	Reception of various museum specimens		
	43	fixation of various museum specimens		
	44	processing of various museum specimens		
12th	45	Cataloguing of museum specimen	12th	Fixation of smears
	46	Revision		
	47	Introduction to autopsy technique (Care and maintenance of autopsy area, autopsy instruments, handling of dead bodies)		
	48	Use of autopsy		
13th	49	Malignant Cells Characteristics	13th	Staining of smears with MGG
	50	Differences from normal cell		
	51	Importance of HCG		
	52	Use of Harmonal Assessment (Pregnancy Test)		
14th	53	Test and Assignment of unit 5,6,7,8	14th	Viva
	54	Principle of FNAC (Fine Needle Aspiration Cytology)		
	55	Indications of FNAC and Uses of FNAC		
	56	Staining Techniques - PAP Stain - MGG (May-Grunwald – Giemsa) - H&E (Haematoxylin & Eosin Stain)		

15th	57	Principle, Technique & Interpretation of : PAS (Periodic Acid Schiffs reagent Stain)	15th	Viva
	58	Principle, Technique & Interpretation of : Zeihl Neelson's(ZN) Stain (AFB)		
	59	Automation in Cytology, Use of Cytospin		
	60	Assignmet and test of unit 9,10,11		