

Lesson Plan

Name of the Faculty : Ms. Pratima Saini

Discipline : MLT

Semester : 3rd

Subject : Histopathology

Lesson Plan Duration: 15 weeks (from September, 2023 to December, 2023)

Workload (Lecture/Practical) per week (in hours) =Lecture=3, Practical=8

WORK	THEORY		Practical	
	Lecture Day	Topic(Including assignment/test)	Practical Day	Topic
1 st	1	Introduction and definition of : Histology, Histopathology Biopsy, Autopsy, Autolysis, Putrefaction	L1	Reception of specimen, labeling and preserving the specimen
	2	Tissue Preparation method Unfixed Tissue preparations: Imprint methods, Teased preparation, Squashed preparation, Frozen section		
	3	Fixed Tissue preparations: Paraffin embedding, Celloidin embedding, Gelatin embedding		
2 nd	4	Reception of Specimen: Reception, recording, labeling and preservation of histological specimen	L2	Preparation of different fixatives with special emphasis on preparation of formaline based fixatives
	5	Introduction about Fixation		
	6	Classification of fixatives: Composition of various fixatives		
3 rd	7	Advantages and disadvantages of fixative	L3	Preparation of paraffin blocks from various tissue pieces and labeling with emphasis on orientation
	8	Processing of tissue		
	9	Different steps of tissue processing: Dehydration, Clearing/ Dealcoholization		
4 th	10	Infiltration and impregnation Paraffin embedding	L4	Handling of microtome
	11	Paraffin Embedding, Mountants		
	12	Various types of mounting media (aqueous, resinous), Advantages and Disadvantage		
5 th	13	Introduction about Microtomy and Microtome	L5	Sharpening of microtome

	14	Types of microtome		knives
	15	Advantages and disadvantages of microtome		
6 th	16	Working principle ,Care and maintenance of microtome	L6	Preparation of blocks for fine cutting - Rough cutting - Trimming
	17	Histokinete (automatic tissue processor) - its types, working, care and maintenance		
	18	Microtome Knives(plan concave, wedge, bioconcave ,edge)		
7 th	19	-Sharpening of knives - Honing technique Stropping technique	L7	Practice off inesection cutting
	20	Automatic knife sharpener–uses, care and maintenance -Uses of abrasives and lubricants		
	21	Introduction to Section Cutting, Rough cutting, Fine cutting		
8 th	22	Use of tissue floatation bath	L8	Practice of lifting of sections on the slides
	23	Use of various adhesive media and lifting of Sections to the slide		
	24	Errors/cutting faults in sections and their remedies		
9 th	25	Assignment	L9	Performing H&E staining on sections and mounting of tissue sections
	26	Test		
	27	Introduction about Exfoliative Cytology		
10 th	28	Preparation of vaginal & cervical smears	L10	Demonstration of cell using buccal smear/urine sample
	29	Urine Collection and Processing of specimen for cytology		
	30	Sputum Collection and Processing of Specimen for cytology		
11 th	31	CSF(Cerebrospinal Fluid) Collection and Processing of specimen for cytology	L11	Processing of urine samples for malignant cells
	32	Introduction about Cytological Specimen Fixation		
	33	Various types of Cytological fixatives		

12 th	34	Advantages and Disadvantages	L12	Processing of sputum sample for malignant cytology
	35	Progressive and regressive staining Use of controls in staining and their significance		
	36	Introduction about Cell Definition and function of cell		
13 th	37	Cell Structure and Multiplication(Mitosis and Meiosis)	L13	To perform PAP stain on given smear
	38	Assignment		
	39	Test		
14 th	40	Introduction about Cytological Staining	L14	To perform MGG & H&E stain on given smear
	41	Principle, Technique and interpretation of results in -Papanicalaou staining		
	42	Principle, Technique and interpretation of results in -May Grunewald & Giemsa staining		
15 th	43	Revision	L15	To demonstrate various automation by use of brochures, charts etc.
	44	Revision		
	45	Revision		