

Name of the Faculty : Dr. Rakesh Garg

Discipline : DMLT

Semester : 4<sup>th</sup>

Subject : Histopathology & Cytology-II

Lesson Plan Duration : One Hour

\*\*Work Load(Lecture/Practical) per week (in hours); Lectures -04, Practicals-03

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test)	Practical Day	Topic
1st	1 <sup>st</sup>	Light Microscope: Introduction and Principles of Light Microscopes	1 <sup>ST</sup>	Demonstration of Light Microscope ( Mechanical and optical )
	2 <sup>nd</sup>	Light Microscope: Introduction and Principles of Light Microscopes	2 <sup>nd</sup>	Demonstration of Light Microscope ( Mechanical and optical )
	3 <sup>rd</sup>	Light Microscope: Various parts of Microscope	3 <sup>rd</sup>	Demonstration of Light Microscope ( Mechanical and optical )
2nd	4 <sup>th</sup>	Light Microscope: Various parts of Microscope	4 <sup>th</sup>	Demonstration of Light Microscope ( Mechanical and optical )
	5 <sup>th</sup>	Light Microscope: Uses of Microscope	5 <sup>th</sup>	Demonstration of Cryostat Brochures and Charts can be used
	6 <sup>th</sup>	Light Microscope: Cleaning and Maintenance of Microscope	6 <sup>th</sup>	Demonstration of Cryostat Brochures and Charts can be used
3rd	7 <sup>th</sup>	Light Microscope: Various attachment of Compound Microscope( Principle Only) Polarizing Microscopy	7 <sup>th</sup>	Demonstration of Cryostat Brochures and Charts can be used

	8 <sup>th</sup>	Light Microscope: Various attachment of Compound Microscope Dark Field Microscopy	8 <sup>th</sup>	Demonstration of Cryostat Brochures and Charts can be used
	9 <sup>th</sup>	Light Microscope: Various attachment of Compound Microscope Phase Contrast microscopy	9 <sup>th</sup>	Processing of Tissue for Frozen Section
4th	10 <sup>th</sup>	Light Microscope: Various attachment of Compound Microscope Fluorescent Microscopy	10 <sup>th</sup>	Processing of Tissue for Frozen Section
	11 <sup>th</sup>	Light Microscope: Various attachment of Compound Microscope Electron Microscopy	11 <sup>th</sup>	Processing of Tissue for Frozen Section
	12 <sup>th</sup>	Special Stains: Principle Significance and Interpretation of Different types of Stains PAS ( Periodic Acid Schiff's Reagent )	12 <sup>th</sup>	Processing of Tissue for Frozen Section
5th	13 <sup>th</sup>	Special Stains: Principle Significance and Interpretation of Different types of Stains PAS ( Periodic Acid Schiff's Reagent )	13 <sup>th</sup>	Staining and Mounting of Frozen Section using H& E Stain ( Rapid Method( , Oil Red "O"
	14 <sup>th</sup>	Special Stains: Silver Inpergnation Stain : Reticulin Fiber	14 <sup>th</sup>	Staining and Mounting of Frozen Section using H& E Stain (


				Rapid Method( , Oil Red "O"
	15 <sup>th</sup>	Special Stains: Silver Inpergnation Stain : Reticulin Fiber	15 <sup>TH</sup>	Staining and Mounting of Frozen Section using H& E Stain ( Rapid Method( , Oil Red "O"
6th	16 <sup>th</sup>	Special Stains: Zeihl Neelson's – for AFB and Leprae	16 <sup>TH</sup>	Staining and Mounting of Frozen Section using H& E Stain ( Rapid Method( , Oil Red "O"
	17 <sup>th</sup>	Special Stains: Zeihl Neelson's – for AFB and Leprae	17 <sup>th</sup>	Preparation of Various Mounting Reagents for Museum Specimen
	18 <sup>th</sup>	Special Stains: Masson's Trichrome Stain	18 <sup>th</sup>	Preparation of Various Mounting Reagents for Museum Specimen
7th	19 <sup>th</sup>	Special Stains: Masson's Trichrome Stain	19 <sup>th</sup>	Preparation of Various Mounting Reagents for Museum Specimen
	20 <sup>th</sup>	Special Stains: Oil Red O- Fat	20 <sup>th</sup>	Demonstration and care Autopsy Instrument
	21 <sup>st</sup>	Special Stains: Oil Red O- Fat	21 <sup>st</sup>	Demonstration and care Autopsy Instrument
8th	22 <sup>nd</sup>	Special Stains: Gram's Stain- Gram's +ve and Gram's -ve	22 <sup>nd</sup>	Demonstration and care Autopsy Instrument
	23 <sup>rd</sup>	Special Stains: Gram's Stain- Gram's +ve and Gram's -ve	23 <sup>rd</sup>	Demonstration and care Autopsy Instrument
	24 <sup>th</sup>	Decalcification: Process of decalcification and various types of	24 <sup>th</sup>	Demonstration of Malignant Cells

		Decalcifying Methods		
9 <sup>th</sup>	25 <sup>th</sup>	Decalcification: Their Mechanism, Advantage, Disadvantage, Application and assessment of Decalcification	25 <sup>th</sup>	Demonstration of Malignant Cells
	26 <sup>th</sup>	Handling of fresh Histological Tissues ( Frozen Section- Reception and Processing of Frozen tissues)	26 <sup>th</sup>	Demonstration of Malignant Cells
	27 <sup>th</sup>		27 <sup>th</sup>	Demonstration of Malignant Cells
10 <sup>th</sup>	28 <sup>th</sup>	Handling of fresh Histological Tissues ( Frozen Section- Freezing Microtome and Cryostat	28 <sup>th</sup>	Preparation of Wet Smear and Dry Smear
	29 <sup>th</sup>	Handling of fresh Histological Tissues ( Frozen Section- Advantages and disadvantages of freezing Microtome and Cryostat)	29 <sup>th</sup>	Preparation of Wet Smear and Dry Smear
	30 <sup>th</sup>	Handling of fresh Histological Tissues ( Frozen Section- Working, Care, Maintenance of freezing Microtome and Cryostat)	30 <sup>th</sup>	Preparation of Wet Smear and Dry Smear
11 <sup>th</sup>	31 <sup>st</sup>	Handling of fresh Histological Tissues ( Frozen Section- Frozen Section cutting	31 <sup>st</sup>	Preparation of Wet Smear and Dry Smear
	32 <sup>nd</sup>	Handling of fresh Histological	32 <sup>nd</sup>	To perform PAP Stain

		Tissues ( Frozen Section-Staining- Rapid H&E, Fat Stain)and Mounting of frozen section		
	33 <sup>rd</sup>	Museum Techniques: Introduction to Museum with Emphasis on Importance of Museum	33 <sup>rd</sup>	To perform PAP Stain
12 <sup>th</sup>	34 <sup>th</sup>	Museum Techniques- Reception, Fixation and Processing of Various Museum Specimen	34 <sup>th</sup>	To perform PAP Stain
	35 <sup>th</sup>	Museum Techniques: Cataloging of Museum Specimen	35 <sup>th</sup>	To perform PAP Stain
	36 <sup>th</sup>	Autopsy: Introduction to Autopsy Technique ( Care and maintenance of Autopsy Area, Instruments, Handling of Dead Bodies)	36 <sup>th</sup>	Fixation of Smear and Staining MGG
13 <sup>th</sup>	37 <sup>th</sup>	Autopsy: Introduction to Autopsy Technique ( Care and maintenance of Autopsy Area, Instruments, Handling of Dead Bodies)	37 <sup>th</sup>	Revision
	38 <sup>th</sup>	Autopsy: Use of Autopsy	38 <sup>th</sup>	Revision
	39 <sup>th</sup>	Malignant Cells: Characteristics	39 <sup>th</sup>	Revision

14 <sup>th</sup>	40 <sup>th</sup>	Malignant Cells: Differences for Normal Cell	40 <sup>th</sup>	Revision
	41 <sup>st</sup>	Malignant Cells: Differences for Normal Cell		
	42 <sup>nd</sup>	Revision		
15 <sup>th</sup>	43 <sup>rd</sup>	Hormonal Assessment: Introduction		
	44 <sup>th</sup>	Hormonal Assessment: importance of HCG		
	45 <sup>th</sup>	Hormonal Assessment: importance of HCG		
16 <sup>th</sup>	46 <sup>th</sup>	Hormonal Assessment: Use of Hormonal Assessment ( Pregnancy Test )		
	47 <sup>th</sup>	Aspiration Cytology: Principle of FNAC ( find Needle Aspiration Cytology)		
	48 <sup>th</sup>	Aspiration Cytology: Principle of FNAC ( find Needle Aspiration Cytology)		
17 <sup>th</sup>	49 <sup>th</sup>	Aspiration Cytology: Indication of FNAC and its Uses		
	50 <sup>th</sup>	Aspiration Cytology: Staining Techniques -PAP Stain		
	51 <sup>st</sup>	Aspiration Cytology: Staining Techniques MGG ( May- Grunwald- Giemsa) and H&E(Haematoxylin		

		nad Eosin Stain)		
	52 <sup>nd</sup>	Cytological Special Stain: Principle, Technique and interpretation of – PAS Stain		
18 <sup>th</sup>	53 <sup>rd</sup>	Cytological Special Stain: Principle, Technique and interpretation of – ZN Stain & AFD Stain		
	54 <sup>th</sup>	Cytological Special Stain: Principle, Technique and interpretation of – ZN Stain & AFD Stain		
19 <sup>th</sup>	55 <sup>th</sup>	Advancement in Cytology: Automation in Cytology, Use of Cyto Stain		
	56 <sup>th</sup>	Advancement in Cytology: Automation in Cytology, Use of Cyto Stain		
	57 <sup>th</sup>	Revision		
20 <sup>th</sup>	58 <sup>th</sup>	Revision		
	59 <sup>th</sup>	Revision		
	60 <sup>th</sup>	Revision		

  
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