JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the Faculty : Mr.Amit Kumar

Discipline : DMLT

Semester : 3rd(2nd Year)

Subject : HISTOPATHOLOGY

Lesson Plan Duration : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
1st	1st	Introduction and definition **(1st**	1st	Reception of specimen, labeling and preserving the specimen
	2nd	Reception of Specimen		
	3rd	Various Terms associated with staining		
2nd	1st	Metachromasia,Accelerators	2nd	Preparation of various smears by unfixed methods
	2nd	Progressive and regressive staining		
	3rd	Use of controls in staining and their significance		
3rd	1st	Haematoxylin and Eosin staining	3rd	Preparation of different fixatives with special emphasis
	2nd	Haematoxylin and Eosin staining		
	3rd	Deparaffinization, Hydration, Nuclear Staining		
4th	1st	Differentiation, Blueing, Counterstaining,	4th	Preparation of paraffin blocks from various tissue pieces and labeling
	2nd	Dehydration		
	3rd	Clearing/Dealcoholization		
5th	1st	Automation: Use of automatic stainer	5th	Handling of microtome
	2nd	automatic coverslipper		
	3rd	Preparation of Tissue (Different Methods) **(2nd**		
6th	1st	Unfixed Tissue preparations	6th	Sharpening of microtome knives
	2nd	Fixed Tissue preparations		
	3rd	Classification of fixatives		
7th	1st	Classification of fixatives	7th	Preparation of blocks for fine cutting
	2nd	Composition of various fixatives		
	3rd	Processing of Tissue (by Paraffin Technique)		
8th	1st	Dehydration,Clearing/Dealcoholization	8th	Practice of fine section cutting
	2nd	Infilteration and impregnation		
	3rd	Paraffin embedding		

9th	1st	Various types of mounting media	9th	Performing H&E staining on sections and mounting of tissue sections
	2nd	Advantages and Disadvantages		
	3rd	Microtome,Types,Advantages and disadvantages **(4th**		
10th	1st	Automation: Automatic knife sharpener	10th	Demonstration of cell using buccal smear/urine sample
	2nd	Various types of knives		
	3rd	Sharpening of knives		
11th	1st	Automation: Automatic knife sharpener	11th	Processing of urine samples for malignant cells
	2nd	Uses of abrasives and lubricants		
	3rd	Section Cutting		
12th	1st	Use of tissue floatation bath	12th	Processing of sputum sample for malignant cytology
	2nd	Use of various adhesive media and lifting of sections to the		
	3rd	Errors /cutting faults in sections and their remedies		
13th	1st	Exfoliative Cytology **(5th**	13th	To perform PAP stain on given smear
	2nd	Preparation of vaginal & cervical smears		
	3rd	Collection and Processing of specimen for cytology		
14th	1st	Collection and Processing of specimen for cytology	14th	To perform MGG stain on given smear
	2nd	Role of cytotechnician in cytology		
	3rd	Role of cytotechnician in cytology		
15th	1st	Papanicalaou staining	15th	To perform H&E on given smear
	2nd	Papanicalaou staining		
	3rd	May Grunwald & Giemsa staining		
16th	1st	May Grunwald & Giemsa staining	16th	Practical assignment
	2nd	Sessional,Test		
	3rd	Sessional,Test		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the Faculty : Mrs. PARMILA Devi

Discipline : DMLT

Semester : 3rd(2nd year)

Subject : PARASITOLOGY AND VIROLOGY

Lesson Plan Duration : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
1st	1st	**Introduction to medical parasitology**	1st	Collection and routine stool examination for detection of intestinal parasites using Saline preparation.
	2nd	Introduction to medical parasitology		
	3rd	**General characteristics, morphology, classification**		
2nd	1st	General characteristics, morphology, classification	2nd	Collection and routine stool examination for detection of intestinal parasites using Lugol's Iodine preparation.
	2nd	**Laboratory Samples for detection of parasites**		
	3rd	Laboratory Samples for detection of parasites		
3rd	1st	**Concentration techniques**	3rd	Concentration methods of stool examination by Floatation method
	2nd	Concentration techniques		
	3rd	Concentration techniques		
4th	1st	Concentration techniques	4th	Concentration methods of stool examination by Sedimentation methods
	2nd	Concentration techniques		
	3rd	Concentration techniques		
5th	1st	**Giardia and Entamoeba histolytica**	5th	Identification of following adult worms/cyst from preserved specimen/slides
	2nd	Giardia and Entamoeba histolytica		
	3rd	Giardia and Entamoeba histolytica		
6th	1st	Giardia and Entamoeba histolytica	6th	Identification of following adult worms/cyst from preserved specimen/slides
	2nd	Giardia and Entamoeba histolytica		
	3rd	**Ancylostoma and Ascaris lumbricoides**		
7th	1st	Ancylostoma and Ascaris lumbricoides	7th	Identification of following adult worms/cyst from preserved specimen/slides
	2nd	Ancylostoma and Ascaris lumbricoides		

	3rd	Ancylostoma and Ascaris lumbricoides		
8th	1st	Ancylostoma and Ascaris lumbricoides	8th	Identification of following adult worms/cyst from preserved specimen/slides
	2nd	Ancylostoma and Ascaris lumbricoides		
	3rd	**T solium, T saginata**		
9th	1st	T solium, T saginata	9th	Identification of following adult worms/cyst from preserved specimen/slides
	2nd	T solium, T saginata		
	3rd	T solium, T saginata		
10th	3rd	T solium, T saginata	10th	Preparation of smear and identification of blood parasites
	1st	Malarial Parasite (P. Vivax and P. Falciparum)		
	2nd	Malarial Parasite (P. Vivax and P. Falciparum)		
11th	3rd	Malarial Parasite (P. Vivax and P. Falciparum)	11th	Preparation of Leishman stain
	1st	Malarial Parasite (P. Vivax and P. Falciparum)		
	2nd	**Malarial Parasite (P. Vivax and P. Falciparum)**		
12th	3rd	Malarial Parasite (P. Vivax and P. Falciparum)	12th	Preparation of Giemsa stain
	1st	**Virology**		
	2nd	Virology		
13th	1st	Virology	13th	Preparation of Field stain
	2nd	Virology		
	3rd	**Medically important viruses**		
14th	3rd	**Medically important viruses**	14th	Preparation of thin and thick smears
	1st	Medically important viruses		
	2nd	Medically important viruses		
15th	3rd	Virological Samples	15th	Staining of smears by Leishman, Giemsa, and Field stain.
	1st	Virological Samples		
	2nd	Sessional,Test		
16th	3rd		16th	Examination of smears for malarial parasite (P. vivax and P. falciparum)
	1st			
	2nd			

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the Faculty : Mrs. PARMILA Devi

Discipline : DMLT

Semester : 3rd(2nd year)

Subject : TRANSFUSION MEDICINE(Blood Bank)

Lesson Plan Duration : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
1st	1st	**Historical introduction to Transfusion medicine (blood banking) (1st**	1st	Performing ABO blood grouping by following method
	2nd	Historical introduction to Transfusion medicine (blood banking)		
	3rd	**Antigen and Antibody**		
2nd	1st	Antigen and Antibody	2nd	Performing ABO blood grouping by following method
	2nd	**Antigen and Antibody**		
	3rd	**ABO Blood Group System**		
3rd	1st	ABO Blood Group System	3rd	Performing ABO blood grouping by following method
	2nd	ABO Blood Group System		
	3rd	ABO Blood Group System		
4th	1st	**The Rh Blood Group System**	4th	Performing-Rh grouping by following techniques
	2nd	The Rh Blood Group System		
	3rd	The Rh Blood Group System		
5th	1st	**The Rh Blood Group System**	5th	Performing-Rh grouping by following techniques
	2nd	**Anticoagulants used in blood bank**		
	3rd	Anticoagulants used in blood bank		
6th	1st	Anticoagulants used in blood bank	6th	Performance of Coombs Test
	2nd	Anticoagulants used in blood bank		
	3rd	**Criteria for selection of Donor**		
7th	1st	Criteria for selection of Donor	7th	Performance of Coombs Test
	2nd	**Blood Collection and storage**		

	3rd	Blood Collection and storage		
8th	1st	Blood Collection and storage	8th	Cross Matching (compatibility testing)
	2nd	Blood Collection and storage		
	3rd	Various blood components (Packed cells, Fresh frozen plasma		
9th	1st	Various blood components (Packed cells, Fresh frozen plasma	9th	Cross Matching (compatibility testing)
	2nd	Various blood components (Packed cells, Fresh frozen plasma		
	3rd	Various blood components (Packed cells, Fresh frozen plasma		
10th	1st	Test for blood transfusion	10th	Preparation of anticoagulants
	2nd	Cross Matching		
	3rd	Cross Matching		
11th	1st	Cross Matching	11th	Malarial Parasite test by Thick and Thin smear preparation
	2nd	Coombs Test		
	3rd	**Coombs Test**		
12th	1st	Coombs Test	12th	VDRL Test
	2nd	**Coombs Test**		
	3rd	Blood Transfusion reactions		
13th	1st	Blood Transfusion reactions	13th	HIV Test
	2nd	Blood Transfusion reactions		
	3rd	**Blood Transfusion reactions**		
14th	1st	Blood Transfusion reactions	14th	HbsAg Test
	2nd	Blood Transfusion reactions		
	3rd	Sessional,Test		
15th	1st	**Sessional,Test**	15th	HCV Test
	2nd	Sessional,Test		
	3rd	Sessional,Test		
16th	1st		16th	Preparation of platelet rich plasma and platelet poor plasma
	2nd			
	3rd			

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the Faculty : Mrs. Poonam

Discipline : DMLT

Semester : 3rd(2nd year)

Subject : Clinical Haematology-I

Lesson Plan Duration : : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
		ESR and PCV		
1st	1st	Introduction	1st	Estimation of ESR by wintrobe method
	2nd	Various methods of estimation of ESR and their merits and demerits		
	3rd	Various methods of estimation of ESR and their merits and demerits		
2nd	1st	Various methods of estimation of ESR and their merits and demerits	2nd	Estimation of ESR by wintrobe method
	2nd	Various methods of estimation of PCV and their merits and demerits		
	3rd	Various methods of estimation of PCV and their merits and demerits		
3rd	1st	Various methods of estimation of PCV and their merits and demerits	3rd	Estimation of ESR by westergren method
	2nd	Factors involved in ESR		
	3rd	Factors involved in ESR		
4th	1st	Interpretation of results	4th	Estimation of ESR by westergren method
	2nd	Interpretation of results		
	3rd	All Unit Revision		
		Red Cell Indicies- MCV, MCH, MCHC		
5th	1st	Definition, reference range, calculation and interpretation of MCV	5th	Estimation of PCV by wintrobe method
	2nd	Definition, reference range, calculation and interpretation of MCV		
	3rd	Definition, reference range, calculation and interpretation of MCH		

6th	1st	Definition, reference range, calculation and interpretation of MCH	6th	Estimation of PCV by Capillary method
	2nd	Definition, reference range, calculation and interpretation of MCHC		
		Supravital stain and reticulocyte counting		
	3rd	Introduction		
7th	1st	Principle and procedure of staining and calculation	7th	Calculate Red Cell Indicies – MCV, MCH, MCHC
	2nd	Principle and procedure of staining and calculation		
	3rd	Principle and procedure of staining and calculation		
8th	1st	Reference values & interpretation	8th	Counting of Reticulocyte in blood
	2nd	Variation in Physiological Values such as Hb, PCV		
	3rd	Variation in Physiological Values such as T.L.C and Platelet count		
		Anemias		
9th	1st	Definition and classification	9th	To perform red cell fragility test on blood
	2nd	Definition and classification		
	3rd	Definition and classification		
10th	1st	Laboratory diagnosis of: Iron deficiency anaemia	10th	To perform Sickling test on blood
	2nd	Laboratory diagnosis of: Iron deficiency anaemia		
	3rd	Laboratory diagnosis of: Iron deficiency anaemia		
11th	1st	Laboratory diagnosis of: Megaloblastic anaemia	11th	Estimation of foetal haemoglobin by alkali denaturation test
	2nd	Laboratory diagnosis of: Megaloblastic anaemia		
	3rd	Laboratory diagnosis of: Haemolytic anaemia		
12th	1st	Laboratory diagnosis of: Haemolytic anaemia	12th	Estimation of plasma haemoglobin
	2nd	Laboratory diagnosis of: Sickle cell anaemia		
	3rd	Laboratory diagnosis of: Sickle cell anaemia		
13th	1st	Laboratory diagnosis of: Thallasseamia	13th	Estimation of and G6PDby Methylene Blue Reduction Test
	2nd	Laboratory diagnosis of: Thallasseamia		
	3rd	Aplastic anaemia		
14th	1st	Aplastic anaemia	14th	To perform red cell fragility test on blood.
		Red Cell fragility test		
	2nd	Principle and procedure		
	3rd	Principle and procedure		

15th	1st	Principle and procedure	15th	
	2nd	Principle and procedure		
	3rd	Principle and procedure		
16th	1st	Principle and procedure	16th	
	2nd	Principle and procedure		
	3rd	Clinical significance		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the : Mrs. Poonam Rani

Discipline : DMLT

Semester : 3rd(2nd year)

Subject : APPLIED CLINICAL BIOCHEMISTRY

Lesson Plan Duration : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
		Serum Bilirubin		
1st	1st	Formation of bile pigments	1st	Serum bilirubin estimation
	2nd	Formation and excretion of bilirubin		
	3rd	Formation and excretion of bilirubin		
2nd	1st	Conjugated and unconjugated bilirubin	2nd	Serum bilirubin estimation
	2nd	Principle and procedures of serum bilirubin estimation (Direct & Indirect)		
	3rd	Reference values & Clinical significance		
		SGOT and SGPT		
3rd	1st	Principle and procedures of estimation	3rd	SGOT estimation
	2nd	Principle and procedures of estimation		
	3rd	Principle and procedures of estimation		
4th	1st	Principle and procedures of estimation	4th	SGOT estimation
	2nd	Reference values & Clinical significance		
	3rd	Reference values & Clinical significance		
		ALP and ACP		
5th	1st	Principle and procedures of estimation	5th	SGPT estimation
	2nd	Principle and procedures of estimation		
	3rd	Principle and procedures of estimation		
6th	1st	Principle and procedures of estimation	6th	SGPT estimation

	2nd	Reference values & Clinical significance		
	3rd	Reference values & Clinical significance		
7th	1st	Principle and procedures of estimation Serum Amylase	7th	Serum amylase estimation
	2nd	Principle and procedures of estimation		
	3rd	Reference values & Clinical significance		
		Serum Calcium and Potassium		
8th	1st	Principle and procedures of estimation	8th	ALP estimation
	2nd	Principle and procedures of estimation		
	3rd	Principle and procedures of estimation		
9th	1st	Principle and procedures of estimation	9th	ACP estimation
		Principle and procedures of estimation		
	2nd	Principle and procedures of estimation		
	3rd	Reference values & Clinical significance		
10th	1st	Reference values & Clinical significance	10th	Serum calcium estimation
	2nd	Reference values & Clinical significance		
	3rd	**Lipid Profile**		
11th	1st	Formation of cholesterol	11th	Serum potassium estimation
	2nd	High density and low density cholesterol		
	3rd	Principles and procedures of estimation		
12th	1st	Principles and procedures of estimation	12th	Serum total cholesterol estimation
	2nd	Reference values & Clinical significance		
	3rd	Triglycerides, pronciple and procedure of estimation		
13th	1st	Inportance of various ratios of HDL., LDL and VLDL	13th	Serum triglyceride estimation
	2nd	Inportance of various ratios of HDL., LDL and VLDL		
	3rd	Inportance of various ratios of HDL., LDL and VLDL		
14th	1st	Inportance of various ratios of HDL., LDL and VLDL	14th	Estimation of HDL
	2nd	Inportance of various ratios of HDL., LDL and VLDL		
	3rd	Sessional,Test		
15th	1st	Sessional,Test	15th	Estimation of LDL and VLDL
	2nd	Sessional,Test		
	3rd	Sessional,Test		
16th	1st	Sessional,Test	16th	Estimation of LDL and VLDL

	2nd			
	3rd			

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)

LESSON PLAN

Name of the Faculty : Mrs. SANEHLATA

Discipline : DMLT

Semester : 3rd

Subject : INDUSTRIAL / IN–HOUSE TRAINING-I

Lesson Plan Duration : : 16 weeks(from 04 August 2025 to 26 November 2025)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Practicals-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
1st	1st		1st	Report writing based on industrial training.
	2nd			
	3rd			
2nd	1st		2nd	Report writing based on industrial training.
	2nd			
	3rd			
3rd	1st		3rd	Preparation of Power Point Slides based on industrial training and presentation by the candidate.
	2nd			
	3rd			
4th	1st		4th	Preparation of Power Point Slides based on industrial training and presentation by the candidate.
	2nd			
	3rd			
5th	1st		5th	Preparation of Power Point Slides based on industrial training and presentation by the candidate.
	2nd			
	3rd			
6th	1st		6th	Internal Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries
	2nd			
	3rd			
7th	1st		7th	Internal Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries
	2nd			

	3rd			
8th	1st		8th	Internal Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries
	2nd			
	3rd			
9th	1st		9th	External Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries.
	2nd			
	3rd			
10th	1st		10th	External Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries.
	2nd			
	3rd			
11th	1st		11th	External Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries.
	2nd			
	3rd			
12th	1st		12th	External Evaluation based on quality of Report, PPT preparation, PPT presentation and answer to queries.
	2nd			
	3rd			
13th	1st		13th	
	2nd			
	3rd			
14th	1st		14th	
	2nd			
	3rd			
15th	1st		15th	
	2nd			
	3rd			
16th	1st		16th	
	2nd			
	3rd			