

Lesson Plan

Name of the Faculty: Seema & Ashish
Discipline: MEDICAL LABORATORY TECHNOLOGY
Semester: 4th
Subject: Biochemistry-IV
Lesson Plan Duration: 15 weeks (From 13th March 2023 to 30 June 2023)

Work Load (Lecture/Practical) per week (in hours): Lectures-03

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 st	1 st	Urine Analysis		Analysis of urine for sugar and proteins qualitative
	2 nd	Normal composition of urine		
	3 rd	Clinical importance of urine analysis		
	4 th	Qualitative analysis of SUGAR		
2 nd	5 th	Qualitative analysis bile salts		Analysis of urine for sugar and proteins quantitative
	6 th	Qualitative analysis of Urobilinogen		
	7 th	Qualitative analysis bile pigments		
	8 th	Qualitative analysis blood		
3 rd	9 th	Detailed discussion on glycosuria		Detection of ketone bodies in urine
	10 th	Ketone bodies		
	11 th	Urinary electrolytes estimation Na		
	12 th	Urinary electrolytes estimation K		
4 th	13 th	Urinary electrolytes estimation Cl		Detection of haematuria

	14 th	Assignment &	
		revision of 1 st unit	
	15 th	Assignment &	
		revision of 1 st unit	
	16 th	revision of 1 st unit	
5 th	17 th	Test unit 1 st and revision	Detection of bile pigments, bile
	18 th	Stool Chemistry	
	19 th	Physical characteristics of Stool Chemistry	
	20 th	Chemical composition of stool	
6 th	21 st	Significance of presence of blood	Detection of bile urobilinogen
	22 nd	Excess fat in stool	
	23 th	Occult blood detection	
	24 th	Assignment & revision of 2 nd unit	
7 th	25 th	Cerebrospinal Fluid	Occult blood test for stool specimen
	26 th	Composition of CSF and its functions	
	27 th	Methods of determination of proteins,	
	28 th	Methods of determination of sugar	
8 th	29 th	Chloride in CSF	Estimation of glucose in CSF
	30 th	Reference Values	
	31 st	Clinical importance	
	32 nd		
	33 rd	Assignment & revision of 3 rd unit	

	34 th	Test of unit 3rd		
	35 th	Biological fluids		Estimation of
9 th	36 th	Formation, composition and significance of biological fluids peritoneal		total proteins
10 th	37 th	synovial Formation,		Estimation of total
		composition and significance of biological fluids pleural,		proteins and globulins in CSF
	38 th	Formation, composition and significance of biological fluids synovial		
	39 th	Formation, composition and significance of biological fluids ascitic fluid		
	40 th	Assignment & revision of 4 th unit		
	41 st	Test of unit 4 th		
	42 nd	Electrophoresis Theory		
11 th	43 rd	Principle and procedure of paper, gel electrophoresis, method of elution		Estimation of chloride in CSF
	44 th	Clinical importance		
	45 th	Clinical significance		
12 th	46 th	Assignment & revision of 5 th unit		Titration for acidity determination and qualitative analysis of gastric juice
	47 th	Test of unit 5 th		
	48 th	Chromatography		
	49 th	Theory of Chromatography, separation between stationary and mobile phases		

13 th	50 th	Principle and procedure of Paper chromatography Importance of chromatography	Demonstration of electrophoresis (Paper electrophoresis)
	51 st	Automation in Biochemistry (05hrs) Classification and types of Autoanalyzers	
	52 nd	Thyroid function tests	
14 th	53 rd	Clinical importance of T ₃ , T ₄ and TSH	Demonstration of chromatography (Paper chromatography)
	54 th	Importance of chromatography	
	55 th	Introduction to Tumor markers	
	56 th	Commonly used Tumor Markers (Cancer Markers)	
15 th	57 th	Revision of 7 th and 8 th unit	Demonstration of chromatography Paper chromatography (revision)
	58 th	Test of unit 9 th unit	
	59 th	Revision of ALL units	
	60 th	Revision along with problem solving session	

