

Lesson Plan

Name of the Faculty : Ms Pratima Saini

Discipline : MLT

Year : 1st Year

Subject : BIOCHEMISTRY-I

Lesson Plan Duration : From October 2021

Work Load (Lecture/Practical) per week (in hours): 3 (T) + 3 G1 (P) + 3 G2 (P) = 9 X 1 hrs =
9hours

Week	Theory		Practical	
	Lecture Day	Topic (including assignment / test)	Practical Day	Topic
1 st	1	Introduction to biochemistry	1	General introduction and safety measures in clinical biochemistry laboratory
	2	Definition and importance of biochemistry		
	3	SI units and their Uses		
2 nd	4	Revision	2	Cleaning of Glassware
	5	Volumetric apparatus and their calibration		
	6	Introduction about glassware and plasticware		
3 rd	7	Cleaning and care of laboratory glassware	3	Handling and maintenance of Balance
	8	Cleaning and care of laboratory plasticware		
	9	Introduction about cleaning agents		
4 th	10	Different cleaning agents	4	Handling and maintenance of Centrifuge
	11	Methods of cleaning		
	12	Methods of storage		
5 th	13	Revision	5	Handling and maintenance of Colorimeter
	14	Introduction about various instruments used in clinical biochemistry laboratory		
	15	Introduction about principle and working of analytical balance		
6 th	16	Electrical/ Electronic balance	6	Handling and maintenance of Glucometer
	17	Handling and care of balance		
	18	Introduction about centrifuge		
7 th	19	Principle and working of centrifuge	7	Handling and maintenance of Ion Selective Electrode
	20	Handling and care of centrifuge		
	21	Introduction about colorimeter		
8 th	22	Principle and working of colorimeter	8	Handling and maintenance of Distillation Plant
	23	Handling and care of colorimeter		
	24	Introduction about spectrophotometer		
9 th	25	Principle and working of spectrophotometer	9	Collection of capillary

	26	Handling and care of spectrophotometer		blood
	27	Introduction about Ion-Selective Electrodes		
10th	28	Principle and working of Ion-Selective Electrodes	10	Collection of Venous blood
	29	Concept of flame photometer		
	30	Introduction about glucometer		
11th	31	Principle and working of glucometer	11	Separation of Serum
	32	Handling and care of glucometer		
	33	Principle, working and care of Distillation Plant		
12th	34	Principle, working and care of deionizer apparatus	12	Separation of Plasma
	35	Introduction about Blood and its fraction		
	36	Revision		
13th	37	Separation of Serum	13	Preparation of Protein Free Filtrate (PFF)
	38	Separation of Plasma		
	39	Different Protein Precipitating reagents		
14th	40	Preparation of protein free filtrate (PFF)	14	Practical Revision
	41	Revision		
	42	Collection and preservation of Blood		
15th	43	Collection and preservation of Urine	15	Practical Test
	44	Collection and preservation of Stool and other body fluids		
	45	Revision		
16th	46	Introduction to Blood glucose/sugar	16	Preparation of Stock and Working Reagents
	47	Glucose Screening test		
	48	Glucose tolerance test introduction		
17th	49	Metabolism of Glucose	17	Estimation of Blood glucose by o-toluidine method
	50	Principle of Glucose estimation		
	51	Method of estimation		
18th	52	Ref. Value and Renal threshold	18	Revision
	53	Introduction and performance of GTT		
	54	Revision		
19th	55	Introduction to Blood urea	19	Perform Glucose tolerance test
	56	Formation and excretion of urea		
	57	Principle and Procedure of urea estimation		
20th	58	Ref. Value and Clinical Importance	20	Serum urea estimation
	59	Revision		
	60	Introduction to Serum Creatinine		
21th	61	Principle and Procedure of Creatinine estimation	21	Serum Creatinine Estimation

	62	Ref. Value a Clinical Importance		
	63	Revision		
22 th	64	Serum Proteins Introduction	22	Plasma Protein Estimation
	65	Procedure of Proteins estimation		
	66	Procedure of serum protein estimation		
23 th	67	Ref. Value & Clinical Importance	23	Serum Protein Estimation
	68	Revision		
	69	Introduction to Electrolytes and trace estimation		
24 th	70	Principle and Procedure of Na estimation	24	Na ⁺ estimation by colorimetric method
	71	Principle and Procedure of K estimation		
	72	Principle and Procedure of Cl estimation		
25 th	73	Revision	25	K ⁺ estimation by colorimetric method
	74	Introduction to uric acid		
	75	Principle and Procedure of uric and estimation		
26 th	76	Ref. Value & Clinical Imp	26	Cl ⁻ estimation
	77	Revision		
	78	Quality Assurance in Biochemistry		
27 th	79	Introduction to National Standards	27	Revisio
	80	National Standards in Medical Laboratory		
	81	Introduction about Internal Quality control		
28 th	82	Internal Quality Assurance	28	Serum uric acid estimation
	83	Introduction about External Quality control		
	84	External Quality assurance		
29 th	85	Revision of Quality Control	29	Practical Test
	86	Class Test		
	87	Class Test & Revision		
30 th	88	Revision	30	Practical Test
	89	Pre-board Test of complete syllabus		
	90	Problem solving and discussion		