

Lesson Plan

Name of the Faculty : Miss. Binny Gaba

Discipline: Medical Lab Technology

Year : 1st Year

Subject : Basic Chemistry

Lesson Plan:

Workload (lecture/practical) per week (in hours): Lectures-02, practicals-02

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical Day (1 lab = 2 hours)	Topic
1st	1st	Biologically important elements		Glassware Identification - different types, cleaning and preparation of cleaning solution. Standardization, rechecking of volumetric glasswares.
	2nd	Study of atomic number, mass number, atomic mass, equivalent weight & molecular weight.		
2nd	3rd	Importance of Basic chemistry in medical laboratory technology.		Determination of pH of different solutions. Titration of Acid and Base.
	4th	Importance of Water quality and Glasswares		

		<i>in clinical laboratory:</i>	
<i>3rd</i>	<i>5th</i>	<i>different types of glassware's, use, cleaning, standardization of volumetric glassware</i>	Performing confirmatory tests for a. Carbohydrate –Molisch, b. Protein- Biuret.
	<i>6th</i>	<i>Importance of Water quality and Glasswares in clinical laboratory:</i>	Performing confirmatory tests for a. Carbohydrate –Molisch, b. Protein- Biuret

4th	7 th	<p><i>Different types of glassware's, use, cleaning, standardization of volumetric glassware & maintenance.</i></p> <p><i>Pipettes - various types and different pipetting techniques.</i></p>		<p>Identification of Parts of Colorimeter & Spectrophotometer.</p>
	8 th	<p><i>Biochemical importance of distilled water and deionised water in clinical analysis.</i></p>		<p>Identification of Parts of Colorimeter & Spectrophotometer.</p>
5th	9 th	<p><i>Solution and colloids – importance of colloids in biological system.</i></p>		<p>Preparation of different types of standards solution.</p>
	10 th	<p><i>Surface tension, osmosis and viscosity their importance in biological system.</i></p>		<p>Preparation of different types of standards solution.</p>
6th	11 th	<p><i>Importance of organic compounds – in Biological system.</i></p>		<p>Determination of Absorption maximum of a coloured solution.</p>
	12 th	<p><i>Basic chemistry of carbohydrates, proteins and lipids - Their nutritional effect in humans.</i></p>		<p>Viva Voice</p>
7th	13 th	<p><i>Physiological importance of Acid & Bases and role of pH in human system.</i></p>		<p>Viva Voice</p>

	14 th	<p><i>Oxidation and</i></p> <p><i>Reduction reactions –</i> <i>Definition. Preparation of</i> <i>various standard</i> <i>solutions</i></p>		Revision and file checking
8th	15 th	<p><i>definition of</i></p> <p><i>primary & secondary</i> <i>standards, SI units and</i> <i>their uses.</i></p>		Viva Voice
	16 th	<p><i>Principles of photometry,</i></p>		Revision and file checking
9th	17 th	<p><i>Laws of photometry,</i></p>		Revision and file checking

	18 th	<p><i>quantification of biomolecules in micro concentration.</i></p>	<p>Viva Voice</p> <p>Revision and file checking</p>
10 th	19 th	<p><i>Principles used in determining concentration of molecules with no known weight - preparation of standard graph.</i></p>	<p>Viva Voice</p> <p>Revision and file checking</p>
	20 th	<p><i>Blood collection for biochemical analysis,</i></p>	
11 th	21 st	<p><i>changes occurring in blood after collection,</i></p>	<p>Viva Voice</p> <p>Revision and file checking</p>

	22 nd	<p><i>Management of its disposal. Different types of Hazards- Biological, Chemical, fire, apparatus.</i></p> <p><i>Safety measures needed in Basic chemistry and clinical biochemistry laboratory.</i></p>		
12 th	23 rd	<p><i>Assuring</i></p> <p><i>Good Laboratory Practices (GLP) in Basic chemistry.</i></p>		Viva Voice
	24 th	Revision		Revision and file checking
13 th	25 th			Viva Voice

		<i>Revision</i>	Revision and file checking
	26 th	<i>Revision</i>	Viva Voice
			Revision and file checking
			Viva Voice
14 th	27 th	<i>Revision</i>	Revision and file checking
	28 th	<i>Revision</i>	
15 th	29 th	<i>Revision</i>	Viva Voice

				Revision and file checking
				Viva Voice
	30 th	<i>Revision</i>		Revision and file checking
16 th	31 st	<i>Revision</i>		
	32 nd			
		<i>Revision</i>		