

# Gautam College of Pharmacy Hamirpur

## LESSON PLAN

Course: D Pharmacy : 2<sup>nd</sup> Year

Session: 2023 - 2024

Subject Name: Bio chemistry & Clinical Pathology

Subject Code: ER20-23T

Total Teaching Hours allocated by PCI: 75

Name of Faculty: Rakesh kumar / *Shivani Sharma*

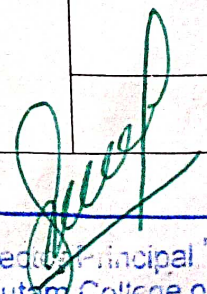
Each lecture: 1 hour

### Syllabus Coverage Schedule

Chapter No.	Topic No.	Title Of Topic	Learning outcome	Schedule date	Pedagogy	Assignment Detail	Remarks
1	1	INTRODUCTION to BIO CHEMISTRY Scope of BIOCHEMISTRY in pharmacy	After completion of the topic student will understand Introduction to BIO CHEMISTRY	07/08/23	Hand Written Notes/PPT		<i>Pokh</i>
	2	Cell and its biochemical organizations		08/08/23			<i>Pokh</i>
2	3	Carbohydrate Definition, classification with examples, chemical properties	After completion of the topic student will understand Introduction to Carbohydrate and their type	09/08/23	Hand Written Notes/PPT		<i>Pokh</i>
	4	Monosaccharides- structure of glucose, fructose and galactose		18/08/23			<i>Pokh</i>
	5	Disaccharides- structure of maltose, lactose and sucrose		21/08/23			<i>Pokh</i>
	6	Polysaccharides— chemical nature of starch and glycogen		22/08/23			<i>Pokh</i>
	7	Qualitative tests for carbohydrates		22/08/23			<i>Pokh</i>
3	8	Protein Definition classification of proteins	After completion of the topic student will understand Introduction to Protein, Amino acids and their identification test	28/08/23	Hand Written Notes/PPT		<i>Pokh</i>
	9	Definition classification of amino acid based on chemical nature		29/08/23			<i>Pokh</i>
	10	Structure of proteins		30/08/23			<i>Pokh</i>

*Pokh*

*Shivani Sharma*

  
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	11	Qualitative tests and biological role of proteins and amino acids		30/08/23							
	12	Diseases related to malnutrition of proteins		04/09/23							
4	13	<b>Lipids</b> Definition classification of lipid structure and properties of triglycerides	After completion of the topic student will understandIntroduction to Lipids	05/09/23	Hand Written Notes/PPT						
	14	Classification of fatty acids		06/09/23							
	15	Structure and function of cholesterol in the body		11/09/23							
	16	Types of lipoprotein and function		12/09/23							
	17	Qualitative tests and functions of lipids		13/09/23							
5	18	<b>Nucleic acids</b> Definition, purine and pyrimidine base		18/09/23							
	19	Components of nucleosides and nucleotides with examples		19/09/23							
	20	Structure of DNA	20/09/23								
	21	Structure of RNA with function	20/09/23								
6	22	<b>Enzymes</b> Definition classification and properties of enzymes	After completion of the topic student will understandIntroduction to Enzymes	25/09/23	Hand Written Notes/PPT						
	23	Factors affecting enzymes activity		26/09/23							
	24	Mechanism action of enzymes		27/09/23							
	25	Enzymes inhibitors		03/10/23							
	26	Therapeutic and pharmaceutical importance of enzyme		04/10/23							
7	27	<b>Vitamins</b> Introduction to vitamin	After completion of the topic student will understandIntroduction to pharmaceutical chemistry	06/10/23	Hand Written Notes/PPT						
	28	Classification of vitamins with examples		06/10/23							
	29	Sources of coenzyme		10/10/23							
	30	Function chemical nature of coenzyme		11/10/23							
	31	Dietary requirements		13/10/23							
	32	Diseases of fat and water soluble vitamins		17/10/23							

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8	33	Metabolism Glycolysis		18/10/23			Potk
	34	TCA cycle		23/10/23			Potk
	35	Glycogen metabolism					Potk

	36	Regulation of blood glucose		27/10/23	Pa	Pathological	Potk	
	37	Disease related to metabolism of carbohydrates		17/11/23		Report on Hb, Urea, ESR	Potk	
	38	Metabolism of lipids-lipolysis		21/11/23			Potk	
	39	Beta oxidation of fatty acid		28/11/23			Potk	
	40	Ketogenesis		04/12/23			Potk	
	41	Ketolysis		06/12/23			Potk	
	42	Ketoacidosis fatty liver and hypercholesterolemia		11/12/23			Potk	
	43	Metabolism of amino acid-general reaction of amino acids and its significance	After completion of the topic student will understandIntroduction to Role of vitamins	19/12/23		Hand Written	Potk	
	44	Transamination, deamination		22/12/23		Notes/PPT	Potk	
	45	Urea cycle		27/12/23			Potk	
	46	Decarboxylation		01/01/24			Potk	
	47	Disease related to abnormal metabolism of amino acid		17/01/24			Shivani Sharma	
	48	Disorder of ammonia metabolism		19/01/24			Shivani Sharma	
	49	Phenylketonuria, alkaptonuria		23/01/24			Shivani Sharma	
	50	Jaundice		29/01/24			Shivani Sharma	
	51	Biological oxidation		29/01/24			Shivani Sharma	
	52	Electron transport chain		30/01/24			Shivani Sharma	
	53	Oxidative phosphorylation		31/01/24			Shivani Sharma	
9	54	<u>Minerals</u> Definition and types of minerals		After completion of the topic student will understandIntroduction to Minerals	05/02/24		Hand	Shivani Sharma
	55	Function of minerals			12/02/24		Written	Shivani Sharma
	56	Deficiency diseases of mineral	13/02/24			Notes/PPT	Shivani Sharma	
	57	Dietary requirements of minerals	19/02/24				Shivani Sharma	
10	58	<u>Water and electrolytes</u> Distribution and function of water in body		20/02/24			Shivani Sharma	

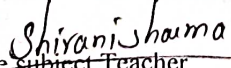

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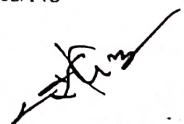
Shivani Sharma

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59	Water turnover and balance	After completion of the topic student will understand Introduction to Water and Electrolytes	26/02/24	Hand Written Notes/PPT	Diagnostic test fee	Shirani Shama
60	Electrolytes composition of body fluids		27/02/24			Shirani Shama
61	Dietary intake of electrolytes and electrolytes balance		12/03/24			Shirani Shama
62	Dehydration and causes of dehydration oral rehydration therapy		13/03/24			Shirani Shama
11	<u>Introduction to biotechnology</u>	After completion of the topic student will understand Introduction to Bio technology	19/03/24	Hand Written Notes/PPT		Shirani Shama
12	<u>Organ function tests</u>	After completion of the topic student will understand Introduction to Organ functions tests	20/03/24	Hand Written Notes/PPT	B1	Shirani Shama
64	Function of kidney		27/03/24			Shirani Shama
65	Routinely performed tests to assess the function of kidney		28/03/24			Shirani Shama
66	Functions of liver		03/04/24			Shirani Shama
67	Routinely performed tests to assess the functions of liver and their clinical significance		08/04/24			Shirani Shama
68	Lipid profile test					Shirani Shama
13	<u>Introduction pathology of blood urine</u>	After completion of the topic student will understand Introduction to Pathology of blood and urine blood	10/04/24	Hand Written Notes/PPT	Diagnostic test fee	Shirani Shama
69	Blood introduction		16/04/24			Shirani Shama
70	Components of blood detail		16/04/24			Shirani Shama
71	Lymphocytes and platelets, their role in health and disease		29/04/24			Shirani Shama
72	Erythrocytes- abnormal cells and their significance		30/04/24			Shirani Shama
73	Urinary system		01/05/24			Shirani Shama
74	Normal constituents of urine		06/05/24			Shirani Shama
75	Abnormal constituents of urine					Shirani Shama

- Total No of Assignments given: 03
- Model question paper given: Yes/No
- No. of extra Lectures delivered: 0
- Feedback from student taken: Yes/No

Signature of the Subject Teacher  
  


  
HOD

  
Principal

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**GAUTAM COLLEGE OF PHARMACY**  
**HAMIRPUR (H.P.)**

**PRACTICAL LESSION PLAN (2023-2024)**

**Name of Faculty** RAKESH KUMAR / Shivani Sharma

**Subject Name:** Biochemistry and Clinical Pathology.

**Subject Code:** ER20-23P

**Course:** D. Pharmacy (2nd Year)

Sr. No.	Title of Experiment	Date	Date	Remarks
		Batch A	Batch B	
1.	To carry out the sample qualitative analysis of carbohydrate (Glucose).	10/8/23	19/8/23	Pdch.
2.	To carry out the sample qualitative analysis of carbohydrate (Fructose).	17/8/23	26/8/23	Pdch.
3.	To carry out the sample qualitative analysis of carbohydrate (Lactose).	14/9/23	2/9/23	Pdch.
4.	To carry out the sample qualitative analysis of carbohydrate (Sucrose).	28/9/23	16/9/23	Pdch.
5.	Qualitative analysis of protein (Albumin).	5/10/23	23/9/23	Pdch.
6.	Qualitative analysis of protein (Casein).	19/10/23	30/9/23	Pdch.
7.	Qualitative analysis of Gelatin.	2/11/23	7/10/23	Pdch.
8.	Qualitative analysis of Tyrosine.	30/11/23	21/10/23	Pdch.
9.	Qualitative analysis of Peptone.	7/12/23	18/11/23	Pdch.
10.	To carry out the qualitative analysis of lipids (Fatty acids).	28/12/23	16/12/23	Pdch.
11.	To analyze the given sample of urine for its normal organic constituents.	18/01/24	23/12/23	Pdch.
12.	To analyze the given sample of urine for its normal inorganic constituents.	01/02/24	30/12/23	Pdch.
13.	To carry out the identification test for abnormal constituents of urine.	08/02/24	20/01/24	Shivani Sharma
14.	To determine the glucose in given sample of urine.	15/02/24	27/01/24	Shivani Sharma

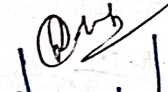
Pdch

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15.	To determine the creatinine level in given sample of urine.	22/02/24	03/02/24	Shivani Shharma
16.	To prepare and identify given sample of cholesterol.	29/02/24	17/02/24	Shivani Shharma
17.	To study qualitative determination of cholesterol in blood/serum.	14/03/24	16/03/24	Shivani Shharma
18.	Quantitative determination of calcium in blood/serum.	21/03/24	23/03/24	Shivani Shharma
19.	Quantitative determination of urine/serum/creatinine in given sample of urine.	04/04/24	30/03/24	Shivani Shharma
20.	Quantitative determination of glucose in blood serum.	18/04/24	06/04/24	Shivani Shharma
21.	Quantitative determination of SGPT in blood/serum.	02/05/24	22/04/24	Shivani Shharma
22.	To study of hydrolysis of starch from acid and salivary enzyme.	02/05/24	04/05/24	Shivani Shharma

  
Shivani Shharma  
 Subject Teacher

  
 Academic I/C

  
 Director/Principal

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