

Lesson Plan

Name of faculty :	MR. YOGESH
Discipline :	DIPLOMA IN PHARMACY
Semester/Year :	2nd Year
Subject/Code :	Biochemistry & Clinical pathology - ER20-23T/ 23P
Lesson Plan Duration :	31 weeks (Sept. 2023 to May 2024)

Work Load (Lecture/Practical) per week (in Hours) :

WEEK	LECTURE DAY	THEORY Topics (Including Assignment/Test)	PRACTICAL DAY	PRACTICALS Topics
	1st	Introduction to biochemistry: Scope of biochemistry in pharmacy		
1st	2nd	Cell and its biochemical organization	1st	Qualitative analysis of carbohydrates (1 experiment)
	3rd	Carbohydrates: Definition, classification with examples, chemical properties		
	1st	Monosaccharides - Structure of glucose, fructose, and galactose		
2st	2nd	Disaccharides - structure of maltose, lactose, and sucrose	2st	Qualitative analysis of carbohydrates (2 experiment)
	3rd	Polysaccharides - chemical nature of starch and glycogen		
	1st	Qualitative tests and biological role of carbohydrates		
3rd	2nd	Revision and clear doubts	3rd	Qualitative analysis of carbohydrates (3 experiment)
	3rd	Assignment & quiz		
	1st	Proteins Definition, classification of proteins based on composition and solubility with examples		
4th	2nd	Definition, classification of amino acids based on chemical nature and nutritional requirements with	4th	Qualitative analysis of carbohydrates (4 experiment)
	3rd	Structure of proteins (four levels of organization of protein structure)		
	1st	Qualitative tests and biological role of proteins and amino acids		
5th	2nd	Diseases related to malnutrition of proteins.	5th	file check & Viva voice
	3rd	Revision & clear doubts		
	1st	Lipids Definition, classification with examples		
6th	2nd	Structure and properties of triglycerides (oils and fats)	6th	Qualitative analysis of Proteins and amino acids (1 experiment)
	3rd	Fatty acid classification - Based on chemical and nutritional requirements with examples		
	1st	Structure and functions of cholesterol in the body		
7th	2nd	Lipoproteins - types, composition and functions in the body	7th	Qualitative analysis of Proteins

	3rd	Qualitative tests and functions of lipids		and amino acids (2 experiment)
	1st	Revision and test		
8th	2nd	Nucleic acids: Definition, purine and pyrimidine bases	8th	Qualitative analysis of Proteins and amino acids (3 experiment)
	3rd	Components of nucleosides and nucleotides with examples		
	1st	Structure of DNA (Watson and Crick model), and their functions		
9th	2nd	RNA and their functions	9th	Qualitative analysis of Proteins and amino acids (4 experiment)
	3rd	Enzymes: Definition, properties and IUB and MB classification		
	1st	Factors affecting enzyme activity		
10th	2nd	Mechanism of action of enzymes, Enzyme inhibitors	10th	file check & Viva voice
	3rd	Therapeutic and pharmaceutical importance of enzymes		
11th		1st SESSIONAL EXAMINATION	11th	1st SESSIONAL PRACTICAL EXAMINATION
	1st	Vitamins: Definition and classification with examples		
12th	2nd	Sources, chemical nature, functions,	12th	Qualitative analysis of lipids (1 experiment)
	3rd	coenzyme form, recommended dietary requirements,		
	1st	deficiency diseases of fat-and water-soluble vitamins		
13th	2nd	deficiency diseases of fat-and water-soluble vitamins	13th	Qualitative analysis of lipids (2 experiment)
	3rd	Assignment & quiz		
	1st	Metabolism of Carbohydrates: Glycolysis, TCA cycle and glycogen metabolism,		
14th	2nd	Metabolism of Carbohydrates: Glycolysis, TCA cycle and glycogen metabolism,	14th	file check & Viva voice
	3rd	regulation of blood glucose level.		
	1st	Diseases related to abnormal metabolism of Carbohydrates		
15th	2nd	revision & clear doubts	15th	Qualitative analysis of urine for normal and abnormal constituents (1 experiment)
	3rd	Metabolism of lipids: Lipolysis		
	1st	β -oxidation of Fatty acid (Palmitic acid) ketogenesis and ketolysis.		
16th	2nd	Diseases related to abnormal metabolism of lipids such as Ketoacidosis,	16th	Qualitative analysis of urine for normal and abnormal constituents (2 experiment)
	3rd	Fatty liver,		
	1st	Hypercholesterolemia		
17th	2nd	Metabolism of Amino acids (Proteins): General reactions of amino acids	17th	Qualitative analysis of urine for normal and abnormal constituents (3 experiment)
	3rd	its significance–Transamination, deamination,		
	1st	Urea cycle and decarboxylation.		
18th	2nd	Diseases related to abnormal metabolism of amino acids,	18th	Qualitative analysis of urine for normal and abnormal constituents (4 experiment)
	3rd	Disorders of ammonia metabolism,		

	1st	phenylketonuria,		
19th	2nd	alkaptonuria	19th	file check & Viva voice
	3rd	Jaundice.		
	1st	Biological oxidation: Electron transport chain		Determination of constituents of
20th	2nd	Oxidative phosphorylation	20th	urine (glucose, creatinine,
	3rd	revision and assignment		chlorides)
	1st	Minerals: Types, Functions,		Determination of constituents of
21st	2nd	Minerals: Types, Functions,	21st	urine (glucose, creatinine,
	3rd	Deficiency diseases,		chlorides)
	1st	recommended dietary requirements		
22nd	2nd	revision and test	22nd	file check & Viva voice
	3rd	assignments		
23rd		WINTER VACATION	23rd	WINTER VACATION
	1st	Water and Electrolytes Distribution, functions of water in the body		Study the hydrolysis of starch
24th	2nd	Water turnover and balance	24th	from acid and salivary amylase
	3rd	Electrolyte composition of the body fluids,		enzyme
25th		2nd SESSIONAL EXAMINATION	25th	2nd SESSIONAL PRACTICAL
				EXAMINATION
	1st	Dietary intake of electrolyte and Electrolyte balance		Determination of constituents of
	2nd	Dehydration, causes of dehydration		blood/serum (simulated)
26th			26th	(Creatine, glucose,
	3rd	oral rehydration therapy		cholesterol, Calcium, Urea,
	1st	Introduction to Biotechnology		SGOT/SGPT) (1 experiment)
		Functions of kidney and routinely performed tests to assess the functions of		Determination of constituents of
27th	2nd	kidney and their clinical	27th	blood/serum (simulated)
		Functions of kidney and routinely performed tests to assess the functions of		(Creatine, glucose,
	3rd	kidney and their clinical		cholesterol, Calcium, Urea,
		Functions of liver and routinely performed tests to assess the functions of liver and		SGOT/SGPT) (2 experiment)
	1st	their clinical		Determination of constituents of
28th	2nd	Lipid profile tests and its clinical significances	28th	blood/serum (simulated)
				(Creatine, glucose,

	3rd	Clear Doubts & Quiz related to previous Topics			cholesterol, Calcium, Urea,
	1st	Introduction to Pathology of Blood and Urine Lymphocytes and Platelets, their role in health and disease			Determination of constituents of
	2nd				blood/serum (simulated)
29th				29th	(Creatine, glucose,
	3rd	Erythrocytes - Abnormal cells and their significance			cholesterol, Calcium, Urea,
	1st	Normal and Abnormal constituents of Urine and their significance			SGOT/SGPT) (4 experiment)
	2nd	Clear Doubts & Quiz related to previous Topics			Determination of constituents of
30th				30th	blood/serum (simulated)
	3rd				(Creatine, glucose,
	1st				cholesterol, Calcium, Urea,
	2nd				SGOT/SGPT) (5 experiment)
31st	2nd		Revision	31st	revision & file check & viva
	3rd		Revision		
			Revision		

Name of faculty :	
Discipline :	
Semester/Year :	
Subject/Code :	SOC
Lesson Plan Duration :	39 we

Work Load (Lecture/Practical) per week (in Hours) :

		THEORY
WEEK	LECTURE DAY	Topics (Including Assignment/Test)
1st	1st	Introduction to Social Pharmacy: Definition and Scope. Social Pharmacy and its scope in improving the public health. Role of Pharmacist
	2nd	Concept of Health -WHO Definition, various determinants, and health indicators.
	3rd	Revision + assignment
2st	1st	National Health Policy – Indian perspective
	2nd	Public and Private Health System in India,
	3rd	National Health Mission
3rd	1st	Introduction to Millennium Development Goals, Sustainable Development Goals
	2nd	Clear Doubts & Quiz related to previous Topic
	3rd	Preventive healthcare – Role of Pharmacists in the Community
4th	1st	Preventive healthcare – Role of Pharmacists in the Family
	2nd	Mother and child health, importance of breastfeeding
	3rd	Ill effects of infant milk substitutes and bottle feeding
5th	1st	Clear Doubts & Quiz related to previous Topic
	2nd	Overview of Vaccines
	3rd	types of immunity
6th	1st	immunization
	2nd	Revision of Previous Topics
	3rd	Effect of Environment on Health – Water pollution
7th	1st	importance of safe drinking water, waterborne diseases
	2nd	air pollution, noise pollution
	3rd	sewage and solid waste disposal
8th	1st	Revision of Previous Topics
	2nd	occupational illnesses
	3rd	Environmental pollution due to pharmaceuticals
9th	1st	Clear Doubts & Quiz related to previous Topic
	2nd	Presentation of unit 1
	3rd	Presentation of unit 2
10th	1st	Revision of unit 1
	2nd	Revision of unit 2
	3rd	
11th		1st SESSIONAL EXAMINATION

		Psychosocial Pharmacy: Drugs of misuse and abuse –psychotropic tobacco products.
12th	1st	
	2nd	Social Impact of these habits on social health and productivity and s
	3rd	Clear Doubts & Quiz related to previous Topic
13th	1st	revision + assignment
	2nd	Basics of nutrition
	3rd	Macronutrients
14th	1st	Micronutrients
	2nd	Clear Doubts & Quiz related to previous Topic
	3rd	revision + assignment
15th	1st	Importance of water and fibres in diet
	2nd	Balanced diet, Malnutrition,
	3rd	nutrition deficiency diseases, ill effects of junk fo
16th	1st	calorific and nutritive values of various foods, fortificati
	2nd	Clear Doubts & Quiz related to previous Topic
	3rd	revision + assignment
17th	1st	Introduction to food safety, adulteration of foods, effects of artifi
	2nd	pesticides, genetically modified foods
	3rd	Clear Doubts & Quiz related to previous Topic
18th	1st	revision
	2nd	Dietary supplements, nutraceuticals,
	3rd	food supplements – indications, benefits, Drug-Food In
19th	1st	Clear Doubts & Quiz related to previous Topic
	2nd	revision
	3rd	Introduction to Microbiology
20th	1st	common microorganisms
	2nd	Clear Doubts & Quiz related to previous Topic
	3rd	revision
21st	1st	Introduction to epidemiology, and its applications. Understanding
	2nd	epidemic, pandemic, endemic,
	3rd	mode of transmission, outbreak, quarantine, isolation, incubati
22nd	1st	tracing, morbidity, mortality,
	2nd	Respiratory infections – chickenpox, measles, rubella
	3rd	influenza including Avian-Flu, H1N1, SARS,
23rd	1st	MERS, COVID-19, diphtheria, whooping cough
	2nd	meningococcal meningitis, acute respiratory infec
	3rd	tuberculosis, Ebola
23rd		WINTER VACATION
24th	1st	Presentation of Respiratory Disease
	2nd	Presentation of Nutrition & Health
	3rd	Presentation of Unit- 2
25th		2nd SESSIONAL EXAMINATION
	1st	Intestinal infections – poliomyelitis, viral hepati

26th	2nd	cholera, acute diarrheal diseases,
	3rd	typhoid, amebiasis,
	1st	worm infestations, food poisoning
27th	2nd	Arthropod-borne infections - dengue
	3rd	malaria
	1st	filariasis
28th	2nd	chikungunya
	3rd	Revision
	1st	Clear Doubts & Quiz related to previous Topic
29th	2nd	Surface infections – trachoma,
	3rd	tetanus, leprosy
	1st	STDs
30th	2nd	HIV/AIDS
	3rd	Revision
	1st	Clear Doubts & Quiz related to previous Topic
31st	2nd	Introduction to health systems
	3rd	all ongoing National Health programs in India their objectives, fu
	1st	all ongoing National Health programs in India their objectives, fu
32nd	2nd	all ongoing National Health programs in India their objectives, fu
	3rd	the role of pharmacists.
	1st	Clear Doubts & Quiz related to previous Topic
33rd	2nd	Pharmacoeconomics – Introduction, basic terminol
	3rd	importance of pharmacoeconomics
	1st	revision
34th	2nd	revision
	3rd	revision

Miss Priyanka
 DIPLOMA IN PHARMACY
 1st Year
 IAL PHARMACY - ER20-24T
 eks (Sept. 2023 to May 2024)

PRACTICALS		
	PRACTICAL DAY	Topics
macy as a discipline s in Public Health. sions,	1st	Preparation & discussion of SOAP of Hypertension
	2st	Preparation & discussion of SOAP of Angina Pectoris
lopment Goals, FIP	3rd	Revision + viva voice
s ography y Planning ding ding s	4th	Preparation & discussion of SOAP of Myocardial Infarction
	5th	Preparation & discussion of SOAP of Hyperlipidaemia
	6th	Revision + viva voice
on eases	7th	Preparation & discussion of SOAP of Rheumatoid Arthritis
	8th	Preparation & discussion of SOAP of Asthma
ls s	9th	Revision
	10th	Preparation & discussion of SOAP of COPD
	11th	1st SESSIONAL PRACTICAL EXAMINATION

s, narcotics, alcohol,	12th	Preparation & discussion of SOAP of Diabetes
suicidal behaviours	13th	Preparation & discussion of SOAP of Epilepsy
s	14th	Revision
ods,	15th	Preparation & discussion of SOAP of Stroke
on of food	16th	Preparation & discussion of SOAP of Depression
s	17th	Revision
cial ripening, use of	18th	Preparation & discussion of SOAP of Tuberculosis
s	19th	Preparation & discussion of SOAP of Anaemia
teractions	20th	Revision
s	21st	Preparation & discussion of SOAP of Viral infection
of terms such as	22nd	Preparation & discussion of SOAP of Dermatological conditions
on period, contact	23rd	WINTER VACATION
, mumps	24th	Revision
, tions	25th	2nd SESSIONAL PRACTICAL EXAMINATION
tis		Patient counselling exercises using role

26th	plays based on the real/ hypothetical clinical case scenarios.
27th	Stimulated cases to enable dose calculation of selected drugs in paediatrics, and geriatrics under various pathological conditions.
28th	Revision

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