

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mr.Amit Kumar

Discipline : DMLT

Semester : Second

Subject : Anatomy & Physiology-II (121922/031922)

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Topic
1st	1st	Central nervous system (brain and spinal cord) (1ST Unit)	1st	Study of various parts of nervous system (brain)
	2nd	Central nervous system (brain and spinal cord)		
	3rd	Central nervous system (brain and spinal cord)		
2nd	1st	Peripheral nervous system (cranial and spinal nerves)	2nd	Study of various parts of nervous system (spinal cord)
	2nd	Peripheral nervous system (cranial and spinal nerves)		
	3rd	(eye, ear, tongue and nose); structure and functions		
3rd	1st	(eye, ear, tongue and nose); structure and functions	3rd	Study of structure of eye((demonstration)
	2nd	(eye, ear, tongue and nose); structure and functions		
	3rd	Central nervous system (brain and spinal cord)(Rept.)		
4th	1st	Circulatory system (2nd Unit)	4th	Study of structure of ear (demonstration)
	2nd	Composition and functions of blood		
	3rd	Anatomy and physiology of Heart		
5th	1st	Anatomy and physiology of Heart	5th	Study of structural differences between skeletal, smooth and cardiac muscles (permanent mounts) through demonstration
	2nd	Circulation of blood		
	3rd	Cardiac Cycle		
6th	1st	Conducting System of Heart	6th	Study of structural differences between skeletal, smooth and cardiac muscles (permanent mounts) through demonstration(rept.)
	2nd	The blood pressure		
	3rd	Arteries and viens- differences		
7th	1st	Arteries and viens- differences	7th	Study of various parts of circulatory system
	2nd	Arteries and viens- differences		
	3rd	Lymph and lymphatic system		
8th	1st	Lymph and lymphatic system	8th	Study of various parts of circulatory system(repeat)
	2nd	Endocrine system (3rd Unit)		
	3rd	Endocrine system		
9th	1st	Endocrine system	9th	Examination of stained blood film for blood cells
	2nd	Endocrine system		
	3rd	Endocrine system		
10th	1st	Endocrine system	10th	Examination of stained blood film for blood cells(rept.)
	2nd	Endocrine system		

	3rd	Endocrine system		
11th	1st	Endocrine system	11th	Estimation of blood pressure
	2nd	Endocrine system		
	3rd	Excretory System (4th Unit)		
12th	1st	Organs of excretion (kidneys,ureter,bladder)	12th	Estimation of blood pressure(repeat)
	2nd	Organs of excretion (kidneys,ureter,bladder)		
	3rd	Formation of urine and its composition		
13th	1st	Structure of nephron	13th	Study of various parts of reproductive system (male)
	2nd	Structure of nephron		
	3rd	Reproductive System (5th Unit)		
14th	1st	Male reproductive system	14th	Study of various parts of reproductive system(female)
	2nd	Male reproductive system		
	3rd	Male reproductive system		
15th	1st	female reproductive system	15th	Study of various parts of Excretory system
	2nd	female reproductive system		
	3rd	female reproductive system		
16th	1st	The ovarian cycle	16th	Study of various parts of Excretory system
	2nd	The ovarian cycle		
	3rd	ovulation & Fertilization		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mr.Amit Kumar

Discipline : DMLT

Semester : Second

Subject : Cl.Microbiology-II

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assigment/test)	Practical Day	Topic
1st	1st	Bacteriology (1st Unit)	1st	To collection,transportation,culture of the Urine.
	2nd	General characteristics of bacteria-morphology,staining,culture, biochemical		
	3rd	Characteristics, antibiotics related to Gram Positive bacteria and their distribution:		
2nd	1st	Characteristics, antibiotics related to Gram Positive bacteria and their distribution:	2nd	To collection,transportation,culture of the stool.
	2nd	Characteristics, antibiotics related to Gram Positive bacteria and their distribution:		
	3rd	Staphylococci		
3rd	1st	Strep to cocci	3rd	To collection,transportation,culture of the sputum.
	2nd	pneumococci		
	3rd	Enterobacteriaceae		
4th	1st	E coli Bacteria	4th	To collection,transportation,culture of sputum (repeat)
	2nd	Salmonella Bacteria		
	3rd	Salmonella Bacteria		
5th	1st	Shigella Bacteria	5th	To collection,transportation,culture of the throat swabs.
	2nd	Characteristics, antibiotics related to Gram Negative bacteria and their distribution:- (2nd Unit)		
	3rd	Pseudomonas Bacteria		
6th	1st	Pseudomonas Bacteria	6th	To collection,transportation,culture of throat swabs.rpt
	2nd	Proteus Bacteria		
	3rd	Proteus Bacteria		

7th	1st	Vibrio Cholerae Bacteria	7th	To collection,transportation,culture of pus & pus swabs.
	2nd	Vibrio Cholerae Bacteria		
	3rd	Neisseria Bacteria		
8th	1st	Neisseria Bacteria	8th	To collection,transportation,culture of pus & pus swabs.rpt
	2nd	Treponema Pallidium Bacteria		
	3rd	Treponema Pallidium Bacteria		
9th	1st	Mycobacterium tuberculosis & leprae	9th	To collection,transportation,culture of the blood.
	2nd	Mycobacterium tuberculosis leprae		
	3rd	Bacterial pathogenicity (3rd Unit)		
10th	1st	Introduction of pathogenicity & infection	10th	To collection,transportation,culture of the blood.(repeat)
	2nd	Sources of infection		
	3rd	Sources of infection		
11th	1st	Mode of spread of infection	11th	To collection,transportation,culture of the skin.
	2nd	Types of infection		
	3rd	Nosocomial Infection (4th Unit)		
12th	1st	Introduction	12th	To collection,transportation,culture of the skin.(repeat)
	2nd	Common types and source of nosocomial infection		
	3rd	Common types and source of nosocomial infection		
13th	1st	Control of nosocomial infections	13th	To collection,transportation,culture of the eye swabs.
	2nd	Laboratory diagnosis of infectious diseases (5th Unit)		
	3rd	Septicaemia and bacteraemia		
14th	1st	R.T.I (Throat Swab and Sputum sample)	14th	To collection,transportation,culture of the ear swabs.
	2nd	Wound infections		
	3rd	Urinary tract infections		
15th	1st	Urinary tract infections	15th	To collection,transportation,culture of the csf.
	2nd	Enteric fever		
	3rd	Intestinal infection		
16th	1st	Intestinal infection	16th	To identification of known bacterial cultures of common pathogens.
	2nd	Meningitis		
	3rd	Meningitis		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mrs. Parmila Devi

Discipline : DMLT

Semester : Second

Subject : Applied Haematology

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Topic
1st	1st	Haemoglobinometry (1ST Unit)	1st	Hemoglobin Estimation by Sahli's method
	2nd	Haemoglobinometry		
	3rd	Formation of hemoglobin, function and its degradation		
2nd	1st	Formation of hemoglobin, function and its degradation	2nd	Hemoglobin Estimation by Oxy-Hemoglobin and Cyanmethaemoglobin method
	2nd	Formation of hemoglobin, function and its degradation		
	3rd	Formation of hemoglobin, function and its degradation		
3rd	1st	Types of hemoglobin	3rd	Counting of RBC
	2nd	Types of hemoglobin		
	3rd	Various methods of estimation with specific reference to cyanmethaemoglobin method		
4th	1st	Various methods of estimation with specific reference to cyanmethaemoglobin method	4th	Counting of WBC
	2nd	Various methods of estimation with specific reference to cyanmethaemoglobin method		
	3rd	Various methods of estimation with specific reference to cyanmethaemoglobin method		
5th	1st	Haemocytometry (2nd Unit)	5th	Platelet counting
	2nd	Haemocytometry		

	3rd	Various counting chambers		
6th	1st	Various counting chambers	6th	Preparation of peripheral blood film
	2nd	Various counting chambers		
	3rd	Various counting chambers		
	3rd	Various counting chambers		
7th	1st	Methods of counting of RBC, WBC and platelets, their calculation and reference values	7th	Preparation and standardization of stains (leishman and giemsa)
	2nd	Methods of counting of RBC, WBC and platelets, their calculation and reference values		
	3rd	Methods of counting of RBC, WBC and platelets, their calculation and reference values		
8th	1st	Methods of counting of RBC, WBC and platelets, their calculation and reference values	8th	Preparation of thick and thin blood smear
	2nd	Methods of counting of RBC, WBC and platelets, their calculation and reference values		
	3rd	Methods of counting of RBC, WBC and platelets, their calculation and reference values		
9th	1st	Methods of counting of RBC, WBC and platelets, their calculation and reference values	9th	Absolute eosinophil counting
	2nd	Methods of counting of RBC, WBC and platelets, their calculation and reference values		
	3rd	Errors involved in haemocytometry and means to minimize them		
10th	1st	Errors involved in haemocytometry and means to minimize them	10th	Study of morphology of normal RBC and WBC with the help of stained slide
	2nd	Errors involved in haemocytometry and means to minimize them		
	3rd	Errors involved in haemocytometry and means to minimize them		
11th	1st	Differential leukocyte counting (DLC) (3rd Unit)	11th	To study abnormal morphology of RBC with the help of stained slide
	2nd	Preparation and staining of blood film		
	3rd	Performance of DLC		
12th	1st	Normal values and significance of DLC	12th	To study abnormal morphology of WBC with the help of stained slide
	2nd	Blood cell morphology in health and disease (Peripheral blood film)		
	3rd	Blood cell morphology in health and disease (Peripheral blood film)		
13th	1st	Quality Assurance in hematology (4th Unit)	13th	To study abnormal morphology of platelet with the help of stained slide
	2nd	Quality Assurance in hematology		
	3rd	Internal & External Quality Assurance		
	1st	Internal & External Quality Assurance		

14th	2nd	Define accuracy, precision& Standard Deviation.	14th	Parts of blood cell counter: Its function and care
	3rd	Define accuracy, precision& Standard Deviation.		
15th	1st	Automation in hematology (5th Unit)	15th	Principle and working of the automated blood cell counter
	2nd	Automation in hematology		
	3rd	Various types of Blood cell counter.		
16th	1st	Various types of Blood cell counter.	16th	Principle and working of the automated blood cell counter
	2nd	Principle and operation of the automated blood cell counters		
	3rd	Principle and operation of the automated blood cell counters		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mrs. Sanehlata

Discipline : DMLT

Semester : Second

Subject : FUNDAMENTALS OF IT

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-02(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Topic
1st	1st	Brief history of development of computers, Definition of Computer (1ST Unit)	1st	Browser features, browsing, using various search engines, writing search queries
	2nd	Block diagram of a Computer, Hardware, Software		
2nd	1st	Booting: Cold and Hot Booting, Interaction between the CPU and Memory with Input/Output devices	2nd	Visit various e-governance/Digital India portals, understand their features, services offered
	2nd	Function of CPU and major functional parts of CPU		
3rd	1st	Memory, Bit, Nibble, Byte, KB, MB, GB, TB, PB, Functions of memory, Use of storage devices in a Computer	3rd	Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc.
	2nd	List types of memory used in a Computer, Importance of cache memory, CPU speed and CPU word length		
4th	1st	Understanding browser, Introduction to WWW, efficient use of search engines (2nd Unit)	4th	Using Administrative Tools/Control Panel Settings of Operating Systems
	2nd	Awareness about Digital India portals (state and national portals) and college portals. Advantages of Email, Various email service providers,		
5th	1st	Creation of email id, sending and receiving emails, attaching documents with email and drive.	5th	Connect various peripherals (printer, scanner, etc.) to computer, explore various features of peripheral and their device driver software.
	2nd	Effective use of Gmail, G-Drive, Google Calendar, Google Sites, Google Sheets		
6th	1st	Online mode of communication using Google Meet & WebEx	6th	Explore features of Open Office tools and MS-Office, create documents, create presentation, create spread sheet, using these features, do it multiple times
	2nd	Introduction to Programming, Steps involved in problem solving, Definition of Algorithm (3rd Unit)		
7th	1st	Definition of Flowchart, Steps involved in algorithm development	7th	Working with Conversion Software like pdfToWord, WordToPPT, etc.
	2nd	differentiate algorithm and flowchart, symbols used in flowcharts, algorithms for simple problems		
8th	1st	flowcharts for simple problems, Practice logic building using flowchart/algorithms	8th	Working with Mobile Applications – Searching for Authentic Mobile app, Installation and Settings, Govt. of India Mobile Applications
	2nd	Office Tools like LibreOffice/Open Office/MOoffice. (4th Unit)		
9th	1st	Open Office Writer – Typesetting Text and Basic Formatting, Inserting Images	9th	Creating email id, sending and receiving mails with attachments.
	2nd	Hyperlinks, Bookmarks, Tables and Table Properties in Writer		
10th	1st	Open Office Writer – Typesetting Text and Basic Formatting	10th	Using Google drive, Google calendar
	2nd	Inserting Images, Hyperlinks, Bookmarks		
11th	1st	Tables and Table Properties in Writer	11th	Create Flow chart and Algorithm for the following a. Addition of n numbers and display result
	2nd	Introducing LibreOffice/Open OfficeCalc		
12th	1st	Working with Cells, Sheets, data, tables	12th	b. To convert temperature from Celsius to Fahrenheit c. To find Area and Perimeter of Square

12th	2nd	Using formulae and functions, using charts and graphics.	12th	c. To find Area and Perimeter of Square d. Swap Two Numbers
13th	1st	OpenOffice Impress – Creating and Viewing Presentations	13th	e. find the smallest of two numbers f. Find whether given number is Even or Odd g. To print first n even Numbers
	2nd	Inserting Pictures and Tables, Slide Master and Slide Design, Custom Animation.		
14th	1st	Slide Design, Custom Animation.	14th	h. find sum of series $1+2+3+\dots+N$ i. print multiplication Table of a number j. generate first n Fibonacci terms $0,1,1,2,3,5\dots n$ ($n>2$)
	2nd	Introduction to Digital Marketing – Why Digital Marketing (5th Unit)		
15th	1st	Characteristics of Digital Marketing, Tools for Digital Marketing	15th	k. sum and average of given series of numbers l. Factorial of number n ($n!=1\times 2\times 3\times\dots n$)
	2nd	Effective use of Social Media like LinkedIn, Google+		
16th	1st	Facebook, Twitter, etc.: Features of Social media	16th	m. Armstrong Number n. Find whether given number is Prime or not
	2nd	Disadvantages of Social Media		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mrs. Poonam Rani

Discipline : DMLT

Semester : Second

Subject : CLINICAL BIOCHEMISTRY

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-03(hr),Practicals-04(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Topic
1st	1st	Introduction to biochemistry (1ST Unit)	1st	Handling and maintenance of Balance
	2nd	Definition and importance of biochemistry		
	3rd	Volume tricapparatus and their calibration Blood fractions		
2nd	1st	Separation of Serum	2nd	Handling and maintenance of Centrifuge
	2nd	Separation of Plasma		
	3rd	Different protein precipitating reagents, Preparation of proteinfreefiltrate(PFF)		
3rd	1st	Collection and preservation of clinical specimens for bio-chemical analysis (2nd Unit)	3rd	Handling and maintenance of Colorimeter
	2nd	Blood		
	3rd	Urine		
4th	1st	Urine	4th	Handling and maintenance of Ion Selective electrode
	2nd	Stool		
	3rd	Stool		
5th	1st	Other Body Fluids	5th	Handling and maintenance of glucometer
	2nd	Other Body Fluids		
	3rd	Blood glucose estimation, screening test and glucose tolerance test (GTT) (3rd Unit)		
6th	1st	Blood glucose estimation, screening test and glucose tolerance test (GTT)	6th	Handling and maintenance of distillation plant/deionizer
	2nd	Principle and methods of estimation		
	3rd	Principle and methods of estimation		
7th	1st	Principle and methods of estimation	7th	Collection of blood by various methods including vacutainer system
	2nd	Reference values		
	3rd	Renal threshold		
1st	Renal threshold			

8th	2nd	Clinical importance of blood sugars/GTT (4th Unit)	8th	Collection of blood by various methods including vacutainer system
	3rd	Clinical importance of blood sugars/GTT		
9th	1st	Blood urea	9th	To Separate serum and plasma from a given blood sample
	2nd	Blood urea		
	3rd	Formation and excretion of urea		
10th	1st	Formation and excretion of urea	10th	To Prepare different protein precipitating agents handoff
	2nd	Reference values		
	3rd	Clinical importance		
11th	1st	Serum proteins (5th Unit)	11th	Preparation of reagents(stock and working)
	2nd	Introduction		
	3rd	Different methods of estimation including principles and procedures		
12th	1st	Different methods of estimation including principles and procedures	12th	Estimation of blood glucose/sugar (O-toluidine method and enzymatic method)
	2nd	Different methods of estimation including principles and procedures		
	3rd	Different methods of estimation including principles and procedures		
13th	1st	Reference values	13th	To Perform/GTT using GOD-POD method
	2nd	Clinical importance		
	3rd	Clinical importance		
14th	1st	Uric Acid	14th	To estimate urea and creatinine in a given serum sample
	2nd	Introduction		
	3rd	principles and procedures of various estimation methods		
15th	1st	principles and procedures of various estimation methods	15th	To estimate of uric acid in a given serum sample
	2nd	principles and procedures of various estimation methods		
	3rd	principles and procedures of various estimation methods		
16th	1st	Reference values	16th	To estimate Plasma and serum protein in given sample
	2nd	Clinical importance		
	3rd	Clinical importance		

JANTA COLLEGE OF PHARMACY,BUTANA(SONEPAT)021

LESSON PLAN

Name of the Faculty : Mrs. Parmila Devi

Discipline : DMLT

Semester : Second

Subject : ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT

Lesson Plan Duration : 16 weeks(from 6 March,2023 to 23 June,2023)(According to Syllabus Scheme)

Work load(Lecture/Practical)per week(in hours) : Lectures-02(hr)

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/test)	Practical Day	Topic
1st	1st	Introduction,Basics of ecology,eco system- concept, and sustainable development (15)	1st	
	2nd	Rain water harvesting,Sources, advantages, disadvantages of renewable and nonrenewable energy		
2nd	1st	Deforestation – its effects & control measures	2nd	
	2nd	Deforestation – its effects & control measures		
3rd	1st	Air pollution,Source of air pollution,Effect of air pollution on human health	3rd	
	2nd	economy,Air pollution control methods		
4th	1st	Noise Pollution: Source of noise pollution,Unit of noise	4th	
	2nd	Effect of noise pollution		
5th	1st	Acceptable noise level	5th	
	2nd	Different method of minimizing noise pollution		
6th	1st	Different method of minimizing noise pollution	6th	
	2nd	Water Pollution:-Cause of water pollution, Impurities in water		
7th	1st	Source of water pollution. Effect of water pollution on human health	7th	
	2nd	Concept of DO, BOD, COD		
8th	1st	Prevention of water pollution- Water treatment processes	8th	
	2nd	ewage treatment. Water quality standard,Soil Pollution :Sources of soil pollution		
	1st	Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial,		

9th	2nd	Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E – waste management	9th	
10th	1st	Impact of Energy Usage on Environment (Global Warming, Green House Effect) (4th Unit)	10th	
	2nd	Depletion of Ozone Layer, Acid Rain		
11th	1st	Concept of Green Buildings	11th	
	2nd	Concept of Carbon Credit & Carbon footprint		
12th	1st	Eco-friendly Material, Recycling of Material	12th	
	2nd	Different Types of Disaster (5th Unit)		
13th	1st	Natural Disaster: such as Flood, Cyclone, Earthquakes and Landslides etc	13th	
	2nd	Man-made Disaster: such as Fire		
14th	1st	Industrial Pollution, Nuclear Disaster, Biological	14th	
	2nd	Disasters, Accidents (Air, Sea Rail & Road)		
15th	1st	Structural failures (Building and Bridge), War & Terrorism etc	15th	
	2nd	Disaster Preparedness Plan, Prediction,		
16th	1st	Early Warnings and Safety Measures of Disaster	16th	
	2nd	Psychological response and Management (Trauma, Stress, Rumour and Panic)		