

CLINICAL BIOCHEMISTRY

L P

3 4

RATIONALE

DETAILED CONTENTS

1st week

UNIT I

Introduction to biochemistry

1.1 Definition and Importance of biochemistry

1.2 Volume apparatus and their calibration Blood fractions

1.3 Separation of Serum

1.4 Separation of Plasma

1.5 Different protein precipitating reagents, Preparation of protein free filtrate (PFF)

2nd week

UNIT II

Collection and preservation of clinical specimens for bio-chemical analysis of

1.1 Blood

1.2. Urine

1.3. Stool

2.5 Other Body Fluids

3rd week

UNIT III

Blood glucose estimation, screening test and glucose tolerance test (GTT)

3.1 Principle and methods of estimation

3.2 Reference values

3.3 Renal threshold

4th week revision

5th week

UNIT IV

Clinical importance of blood sugars/GTT

4.1 Blood urea

4.2 Formation and excretion of urea

6th week

4.3 Principle and procedures of different methods of urea estimation

4.3 Reference values

4.5 Clinical Importance

7th week

UNIT V

Serum proteins

1.1 Introduction

1.2 Different methods of estimation including principles and procedures

1.3 Reference values

1.4 Clinical importance

8th week revision

9th week

Uric Acid

1.5 Introduction, principles and procedures of various estimation methods

10th week

1.6 Reference values

1.7 Clinical Importance

PRACTICAL EXERCISES

1. Handling and maintenance of Balance, Centrifuge, Colorimeter, Ion Selective electrode and glucometer, distillation plant/deionizer
2. Collection of blood by various methods including vacutainer system
3. To Separate serum and plasma from a given blood sample.
4. To Prepare different protein precipitating agents handoff
5. Preparation of reagents(stock and working)
6. Estimation of Blood glucose (O-toluidine method and enzymatic method)
7. To Perform/GTT using GOD-POD method
8. To estimate urea and creatinine in a given serum sample.
9. To estimate of uric acid in a given serum sample.
10. To estimate Plasma and serum protein in given sample

Name: : Suman
 Discipline: : DMLT
 Sem : 2nd Sem
 Subject : Anatomy & Physiology
 Lesson Plan: 15 weeks (from Feb,2024 to June, 2024)

Week	Theory		Practical	
	Lecture/Day	Topic	Practical	
1st	1st	Composition & functions of blood	1st	Study of Par
	2nd	Anatomy of Heart		
	3rd	Physiology of Heart		
2nd	1st	Functioning of heart	2nd	Estimation
	2nd	Circulation of blood		
	3rd	Cardiac Cycle		
3rd	1st	Conducting System of Heart	3rd	Examination
	2nd	The blood pressure		
	3rd	Factors Affecting BP		
4th	1st	Arteries and veins	4th	The blood p
	2nd	Lymph (Function and Composition)		
	3rd	lymphatic system		
5th	1st	Central nervous system	5th	Study of Va
	2nd	Brain (anatomy and physiology)		
	3rd	Spinal cord		
6th	1st	Cranial nerves	6th	Study of Va
	2nd	spinal nerves		
	3rd	Eye		
7th	1st	Ear	7th	Study of Str
	2nd	Tounge and nose		
	3rd	Muscles		
8th	1st	skeletal muscles	8th	Study of str
	2nd	Smooth muscles		
	3rd	Cardiac Muscles		
9th	1st	Muscle fatigue	9th	skeletal, sr
	2nd	Test		
	3rd	Endocrine gland		
10th	1st	Pituitary Gland	10th	Study of N
	2nd	Pituitary gland		
	3rd	Thyroid gland		
11th	1st	Parathyroid gland	11th	Revision
	2nd	Adrenal gland		
	3rd	Pancreas		
12th	1st	Sex gland	12th	Study of M:
	2nd	Thymus		
	3rd	Pineal gland		
13th	1st	Male reproductive system	13th	Study of M:
	2nd	Male Genital organs		

	3rd	Female reproductive system		
14th	1st	Female genital organs	14th	Female rep
	2nd	ovarian cycle		
	3rd	ovarian cycle		
15th	1st	ovulation	15th	Revision
	2nd	Fertilization		
	3rd	Test		

Topic
parts of circulatory system
of blood pressure
n of Stained blood film of blood cell
pressure
various parts of brain
various parts of spinal cord
structure of eye
structure of ear
smooth & cardiac Muscles
Muscles
male reproductive system
male reproductive system

roductive system

BPS MAHILA POLYTECHNIC KHANPUR KALAN

Lesson Plan

Name of the Faculty: SAVITA SHARMA

Department: DMLT

Semester:

SECOND

Subject: FIT

Lesson Plan Duration: 15 weeks (from Sept 2023 to Jan 2024)

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

Week	Theory		Practical
	Lect. day	Topic(Including assignment / test)	Practical Topic
1st	1st	Brief history of development of computer, definition of computer, block diagram of a computer, booting, cpu	Browsers feature, using of browser search engine, search queries
	2nd	Memory, bit, byte, kb, mb, tb, pb, functions of CPU, storage devices of a computer,	
2nd	1st	list the type of memory	Visit Various E Government Portals
	2nd	Memory size and word length	
3rd	1st	understanding browser, WWW, search engine, Digital india portal and collage portal,	Computer Hardware
	2nd	advantages of email, various email service provider, creation of email id,	
4th	1st	sending and receiving emails, attaching document with email	using of control Panel
	2nd	effective use of Gmail, G-drive, Google sites, Google Sheets,	
5th	1st	Google meet, revision	Connect to various Peridhiral to computer
	2nd	introduction to programming, steps involved in problem solving	
6th	1st	definition of Algo, Definition of Flowchart	Open office tools
	2nd	Algorithm development	
7th	1st	defferentiate algo and flowchart	Open office tools
	2nd	symbol used in flowchart,	
8th	1st	Problems for algo and flow chart	conversion from PDF to Word and other Software
	2nd	Problems for algo and flow chart	

9th	1st	Problems for algo and flow chart	working with mobile apps
	2nd	Problems for algo and flow chart	
10th	1st	office tools like MS office	Creating of email id and using of mails
	2nd	open office writer	
11th	1st	open office Liber	using of google Drive
	2nd	open office Liber	
12th	1st	open office writer	flowchart and algo of Addition,celcius to farhenheit
	2nd	open office Writer	
13th	1st	open office impress	flowchart and algo of area,and swaping of two numbers
	2nd	open office impress	
14th	1st	introduction to Digital marketing,charactersticsof DM	flowchart and algo of even and odd numbers,sum of series,feboacci series
	2nd	Tools,Effective use of social media like Twitter Facebook	
15th	1st	Feature,advantage and disadvantage of social media	factorial of a number,Armstrong number,prime number
	2nd	Revision	