

Name of the Faculty : Mr. Yajbir

Discipline : DMLT

Semester : 4<sup>th</sup>

Subject : Clinical Biochemistry-IV

Lesson Plan Duration : One Hour

\*\*Work Load (Lecture/Practical) per week (in hours); Lectures -03, Practicals-03

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/ test)	Practical Day	Topic
1st	1 <sup>st</sup>	Urine Analysis- Normal composition of Urine	1 <sup>st</sup>	Analysis of Urine for Sugar and proteins : Qualitative
	2 <sup>nd</sup>	Urine Analysis- Normal composition of Urine	2 <sup>nd</sup>	Analysis of Urine for Sugar and proteins : Qualitative
	3 <sup>rd</sup>	Urine Analysis- Clinical Importance of Urine Analysis	3 <sup>rd</sup>	Analysis of Urine for Sugar and proteins : Quantitative
2nd	4 <sup>th</sup>	Urine Analysis- Clinical Importance of Urine Analysis	4 <sup>th</sup>	Analysis of Urine for Sugar and proteins : Quantitative
	5 <sup>th</sup>	Urine Analysis- Qualitative Analysis of Protein, Sugar, Bile Salt, Bile Pigments, Urobilinogen and Blood	5 <sup>th</sup>	Detection of Ketone bodies in Urine
	6 <sup>th</sup>	Urine Analysis- Qualitative Analysis of Protein, Sugar, Bile Salt, Bile Pigments, Urobilinogen and Blood	6 <sup>th</sup>	Detection of Ketone bodies in Urine
3rd	7 <sup>th</sup>	Urine Analysis- detailed Discussion	7 <sup>th</sup>	Detection of Ketone bodies in

		on Glycosuria and Albuminuria		Urine
	8 <sup>th</sup>	Urine Analysis-detailed Discussion on Glycosuria and Albuminuria	8 <sup>th</sup>	Detection of Haematuria
	9 <sup>th</sup>	Urine Analysis-Ketone Body	9 <sup>th</sup>	Detection of Haematuria
4th	10 <sup>th</sup>	Urine Analysis-Ketone Body	10 <sup>th</sup>	Detection of Haematuria
	11 <sup>th</sup>	Urine Analysis-urinary Electrolytes Estimation (Na, K, Cl)	11 <sup>th</sup>	Detection of Bile Pigments, Bile Salts and Urobilinogen
	12 <sup>th</sup>	Stool Chemistry-Physical Characteristics and Chemical composition of Stool	12 <sup>th</sup>	Detection of Bile Pigments, Bile Salts and Urobilinogen
5th	13 <sup>th</sup>	Stool Chemistry-Physical Characteristics and Chemical composition of Stool	13 <sup>th</sup>	Detection of Bile Pigments, Bile Salts and Urobilinogen
	14 <sup>th</sup>	Stool Chemistry-Physical Characteristics and Chemical composition of Stool	14 <sup>th</sup>	Occult Blood Test for Stool Specimen
	15 <sup>th</sup>	Stool Chemistry-Physical Characteristics and Chemical composition of Stool	15 <sup>th</sup>	Occult Blood Test for Stool Specimen
6th	16 <sup>th</sup>	Stool Chemistry-Significance of Presence of Blood and Excess Fat In Stool	16 <sup>th</sup>	Occult Blood Test for Stool Specimen
	17 <sup>th</sup>	Stool Chemistry-Significance of Presence of Blood	17 <sup>th</sup>	Occult Blood Test for Stool Specimen

		and Excess Fat In Stool		
	18 <sup>th</sup>	Stool Chemistry- Occult Blood Detection	18 <sup>th</sup>	Occult Blood Test for Stool Specimen
7th	19 <sup>th</sup>	Stool Chemistry- Occult Blood Detection	19 <sup>th</sup>	Estimation of Glucose in CSF
	20 <sup>th</sup>	Cereberospinal Fluid – Composition of CSF and Its Functions	20 <sup>th</sup>	Estimation of Glucose in CSF
	21 <sup>st</sup>	Cereberospinal Fluid – Composition of CSF and Its Functions	21 <sup>st</sup>	Estimation of Total Protein and Globulins in CSF
8th	22 <sup>nd</sup>	Cereberospinal Fluid – Composition of CSF and Its Functions	22 <sup>nd</sup>	Estimation of Total Protein and Globulins in CSF
	23 <sup>rd</sup>	Cereberospinal Fluid – Methods of Determination of Protein, Sugar and Chloride in CSF	23 <sup>rd</sup>	Estimation of Total Protein and Globulins in CSF
	24 <sup>th</sup>	Cereberospinal Fluid – Reference Values and Clinical Significance	24 <sup>th</sup>	Estimation of Total Protein and Globulins in CSF
9th	25 <sup>th</sup>	Biological Fluids- formation, Composition and Significance of Peritoneal Fluid	25 <sup>th</sup>	Estimation of Chloride in CSF
	26 <sup>th</sup>	Biological Fluids- formation, Composition and Significance of- Pleural fluid	26 <sup>th</sup>	Estimation of Chloride in CSF
	27 <sup>th</sup>	Biological Fluids- formation, Composition and Significance of- Synovial Fluid, Acetic Fluid	27 <sup>th</sup>	Estimation of Chloride in CSF
10th	28 <sup>th</sup>	Revision	28 <sup>th</sup>	Titration for Acidity

				Determination and Qualitative analysis of Gastric Juice
	29 <sup>th</sup>	Revision	29 <sup>th</sup>	Titration for Acidity Determination and Qualitative analysis of Gastric Juice
	30 <sup>th</sup>	Electrophoresis-Theory	30 <sup>th</sup>	Titration for Acidity Determination and Qualitative analysis of Gastric Juice
11 <sup>th</sup>	31 <sup>st</sup>	Electrophoresis-Principle and Procedure of Paper/ Gelelectrophoresis, Methods of Elution and Clinical Importance	31 <sup>st</sup>	Titration for Acidity Determination and Qualitative analysis of Gastric Juice
	32 <sup>nd</sup>	Electrophoresis-Principle and Procedure of Paper/ Gelelectrophoresis, Methods of Elution and Clinical Importance	32 <sup>nd</sup>	Titration for Acidity Determination and Qualitative analysis of Gastric Juice
	33 <sup>rd</sup>	Electrophoresis-Principle and Procedure of Paper/ Gelelectrophoresis, Methods of Elution and Clinical Importance	33 <sup>rd</sup>	Titration for Acidity Determination and Qualitative analysis of Gastric Juice
12 <sup>th</sup>	34 <sup>th</sup>	Chromatography: Theory of Chromatography, Separation between stationary and mobile phases	34 <sup>th</sup>	Demonstration of Electrophoresis ( Paper Electrophoresis)

	35 <sup>th</sup>	Chromatography: Theory of Chromatography, Separation between stationary and mobile phases	35 <sup>th</sup>	Demonstration of Electrophoresis ( Paper Electrophoresis
	36 <sup>th</sup>	Chromatography: Principle and procedure of Paper Chromatography	36 <sup>th</sup>	Demonstration of Electrophoresis ( Paper Electrophoresis
13 <sup>th</sup>	37 <sup>th</sup>	Chromatography: Importance of Chromatography	37 <sup>th</sup>	Demonstration of Chromatography ( Paper Chromatography)
	38 <sup>th</sup>	Automation in Biochemistry: Classification	38 <sup>th</sup>	Demonstration of Chromatography ( Paper Chromatography
	39 <sup>th</sup>	Automation in Biochemistry: Types of Auto Analyzers	39 <sup>th</sup>	Demonstration of Chromatography ( Paper Chromatography)
14 <sup>th</sup>	40 <sup>th</sup>	Automation in Biochemistry: Types of Auto Analyzers	40 <sup>th</sup>	Demonstration of Chromatography ( Paper Chromatography)
	41 <sup>st</sup>	Automation in Biochemistry: Types of Auto Analyzers	41 <sup>st</sup>	Demonstration of Chromatography ( Paper Chromatography)
	42 <sup>nd</sup>	Automation in Biochemistry: Types of Auto Analyzers	42 <sup>nd</sup>	Demonstration of Chromatography ( Paper Chromatography)
15 <sup>th</sup>	43 <sup>rd</sup>	Thyroid function Tests		
	44 <sup>th</sup>	Thyroid function Tests: Clinical Importance of T3		
	45 <sup>th</sup>	Thyroid function Tests: Clinical Importance of T4		
16 <sup>th</sup>	46 <sup>th</sup>	Thyroid function Tests: Clinical Importance of TSH		
	47 <sup>th</sup>	Tumor Markers:		

		Introduction		
	48 <sup>th</sup>	Tumor Markers: Commonly used Tumor Markers (Cancer Markers)		

  
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