

Month : April 2017
Total hours : 21hours

Specific learning objectives for students

S.N.	Date & Time	Must know	Desirable to know	Nice to know
1.	03.04.2017 Monday 3.30PM- 4.30PM Lecturer : Mr.K.P.Shiva Govindan	Topic:- Selenium , MG, MN		
2.	04.04.2017 Tuesday 8.30AM- 9.30AM Lecturer : Dr.K.Gunanathi	Topic:- Renal function test: 1. Functions of the kidney Clinical importance of blood urea and serum creatinine levels in renal disease. 2. Estimation of GFR: Creatinine Clearance and its importance. 3. Nephrotic syndrome – major clinical features and laboratory Diagnosis.	Proteinuria 1. Types (glomerular, tubular and overflow proteinuria) and Characteristic proteins present in urine in each type. Microalbuminuria and Its importance. 2. Concepts of tests to assess tubular function measurement of plasma and urine osmolality	Renal tubular Acidosis. 1. Lab investigations in acute kidney injury and chronic kidney disease Laboratory tests to diagnose prerenal, renal and post- renal causes of acute Renal failure.
2.	06.04.2017 Thursday 9.30AM- 10.30AM Lecturer : Dr.D.Sultan Sheriff	Liver function tests Functions of the liver. Major causes of liver dys function. Tests done function in clinical practice: 1. Tests to assess ability to detoxify and excrete substances: conjugated and unconjugated bilirubin (van den Bergh's test), blood ammonia levels. 2. Tests to assess biosynthetic functions: total protein and serum albumin levels, prothrombin time 3. Markers of liver injury: alanine transaminase (ALT) and aspartate transaminase (AST) 4. Marker of cholestasis: alkaline Phosphatase (ALP).		


		Differential diagnosis of jaundice, based on liver function Tests. to assess liver		
3.	07.04.2017 Friday 9.30AM-10.30AM Lecturer : Dr.S.SakthiDas	Thyroid function test: 1. Regulation of secretion of Thyroid hormones.		1. Importance of estimation of TSH in assessment of Thyroid function. 2. Measurement of total and free thyroxine levels. 3. Role of TSH and free thyroxine in laboratory diagnosis of hypothyroidism and hyperthyroidism
4.	08.04.2017 Saturday 8.30AM-9.30AM Lecturer : Dr.D.Sultan Sheriff			Adrenal function tests 1. Hormones produced by the adrenal cortex and medulla. 2. Regulation of secretion of Adrenocortical hormones. 3. Basic tests done for the Laboratory diagnosis of Adrenal hypofunction And hyperfunction (serum and urine cortisol)
5.	10.04.2017 Monday 3.30AM-4.30AM Lecturer : Dr.S.SaleemBasha	Nucleotide chemistry 1. Purine and pyrimidine bases found in DNA and RNA. 2. Definition and types of nucleosides and nucleotides. 3. Function of physiologically important nucleotides.	1.Examples of synthetic analogues of purine and pyrimidine bases and nucleosides used as therapeutic agents (anti-cancer drugs, anti-viral drugs and allopurinol).	
6.	11.04.2017 Tuesday 8.30AM-9.30AM Lecturer : Dr.S.SaleemBasha	1. Role of folic acid in purine synthesis.	1. Name of compounds required for purine and pyrimidine synthesis.	1. Overview of the pathway of de novo synthesis of purine nucleotides (name of only starting material and end products – AMO and GMP – required). 2. Overview of pathway of de novo synthesis of pyrimidine nucleotides showing

				only starting material, rate-limiting enzyme and end products. 3. Disorders of pyrimidine metabolism:- oroticaciduria.
7.	13.04.2017 Thursday 9.30AM-10.30AM Lecturer : Dr.S.SakthiDasan	1. Overview of the pathway of degradation of purines to form uric acid, including role of xanthine oxidase.	1. Salvage pathway for purine bases and nucleosides. 2. Kesch – Nyhan syndrome (cause and biochemical basis of clinical features).	
8.	14.04.2017 Friday	TAMIL NEW YEAR		
9.	15.04.2017 Saturday 8.30AM-9.30AM Lecturer : Dr.S.SakthiDasan	1. Hyperuricemia and gout (causes, clinical features, principles of treatment, including mechanism of action of allopurinol and probenecid).	1. Mechanism of action of methotrexate and 5-fluorouracil, as examples of drugs used in cancer chemotherapy.	
10.	15.04.2017 Saturday 1.30PM-3.30PM Lecturer All Faculties	CLASS TEST		
11.	17.04.2017 Monday 3.30PM-4.30PM Lecturer : Dr.S.SaleemBasha	The cell cycle, DNA and RNA structure 1. Watson and Crick model of DNA structure (including simple diagrammatic representation of the salient features of DNA structure). 2. Types and functions of different types of RNA. Overview of organization of DNA in a chromosome.		1. Overview of the cell cycle Differences between nuclear and mitochondrial DNA.

12.	<p>18.04.2017 Tuesday</p> <p>8.30AM- 9.30AM</p> <p>Lecturer : Dr.D.Sultan Sheriff</p>	<p>DNA replication and repair</p> <ol style="list-style-type: none"> 1. Overview of the process of DNA replication in eukaryotes 2. Roles of DNA polymerase, helicase, primase, topoisomerase and DNA ligase. 	<ol style="list-style-type: none"> 1. Inhibitors of DNA replication as anticancer Drugs. 2. Overview of role of major DNA repair mechanisms – mismatch repair, base excision repair, nucleotide excision repair and double Strand break repair. 	<ol style="list-style-type: none"> 1. Importance of telomeres and telomerase
13.	<p>20.04.2017 Thursday</p> <p>9.30AM- 10.30AM</p> <p>Lecturer: Dr.D.Sultan Sheriff</p>	<ol style="list-style-type: none"> 1. Diagrammatic representation of the events at the replication fork Okazaki fragments and its Importance in replication 	<ol style="list-style-type: none"> 1. Diseases associated with abnormalities of DNA repair systems – xeroderma Pigmentosa and hereditary nonpolyposis Colon Cancer (HNPCC). 	
14.	<p>21.04.2017 Friday</p> <p>9.30AM- 10.30AM</p> <p>Lecturer: Dr.S.SakthiDas an</p>	<p>Transcription</p> <ol style="list-style-type: none"> 1. Structure of a gene - concepts of exons and introns, promoter, enhancers/repressors and response elements. 2. Overview of the process of transcription in eukaryotes – initiation, elongation and termination 3. Post-transcriptional processing – capping, tailing and splicing. 		
15.	<p>22.04.2017 Saturday</p> <p>8.30AM- 9.30AM</p> <p>Lecturer : Dr.S.SaleemBa sha</p>	<p>Translation and genetic code:</p> <ol style="list-style-type: none"> 1. Genetic code - definition. Characteristics of the genetic code – universal, unambiguous, degenerate, without punctuation (continuous/commaless). 2. Basis of degeneracy of the genetic code (wobble hypothesis). 3. Components of eukaryotic ribosomes. modifications – examples 	<ol style="list-style-type: none"> 1. Overview of the process of translation – initiation, elongation and termination Inhibition of prokaryotic translation by antibiotics. 2. Post-translational 	

16	<p>24.04.2017 Monday</p> <p>3.30PM- 4.30PM</p> <p>Lecturer : Dr.S.SaleemBa sha</p>	<p>1. Structure of tRNA (diagram of clover leaf model of tRNA structure) and its function in protein synthesis.</p> <p>2. Function of aminoacyl-tRNA synthase.</p>		
17.	<p>25.04.2017 Tuesday</p> <p>8.30AM- 9.30AM</p> <p>Lecturer : Dr.K.Gunanith i</p>	<p>Mutations and regulation of gene expression</p> <p>Mutations: Definition. Mutagens- examples of physical, chemical and biological mutagens. Types of mutations. point mutation (deletion, insertion, substitution – transition and transversion, frame shift mutation, • missense mutation, nonsense mutation and silent mutation • chromosomal mutations (deletion, inversion and</p>	<p>Relationship of mutations with specific diseases – eg, sickle cell anemia and chronic myeloid leukemia.</p>	<p>Prokaryotes: The operon concept in prokaryotes (using Lac operon as an example).</p> <p>Eukaryotes: Overview of regulation of initiation of eukaryotic transcription: role of general and genespecific transcription</p>
18.	<p>27.04.2017 Thursday</p> <p>9.30AM- 10.30AM</p> <p>Lecturer : Dr.D.Sultan Sheriff</p>	<p>Recombinant DNA technology and techniques in Molecular biology: Importance and applications of recombinant DNA technology Importance and applications of Polymerase chain reaction (PCR)</p>	<p>1. Restriction Endonucleases. Vectors for cloning – plasmids and phages. Genomic and cDNA libraries.</p> <p>2. Principles and applications of techniques in molecular biology: (Southern, northern and western blotting, restriction fragment length polymorphism [RFLP])</p>	

19.	28.04.2017 Friday 9.30AM- 10.30AM Lecturer : Dr.D.Sultan Sheriff	1. Applications of recombinant DNA technology in medicine. 2. General principles of production of therapeutic proteins, e.g., insulin Gene therapy Diagnosis of genetic diseases and genetic counseling forensic investigation		
20.	29.04.2017 Saturday 8.30AM- 9.30AM Lecturer : Dr.D.Sultan Sheriff	Over View :- Molecular Biology		


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DEPARTMENT OF BIOCHEMISTRY

1ST MBBS -2016-17 BATCH OF PRACTICAL & TUTORIAL TEACHING SCHEDULE APRIL-2017

Month : April 2017

Practical & Tutorial total Teaching hours : 32 hours

Time : 1.30 to 3.30 PM

S.NO	DATE & DAY	TOPIC TO BE COVERED	TEACHING STAFF
1	3.4.2017 Monday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD.	DR.S.SAKTHI DASAN DR.S.SALEEM BASHA DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS: NUCLEOTIDE CHEMISTRY & METABOLISM.	DR.D.SULTAN SHERIFF DR.K.GUNANITHI
2	4.4.2017 Tuesday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	DR.S.SAKTHI DASAN DR.S.SALEEM BASHA DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : NUCLEOTIDE CHEMISTRY & METABOLISM	DR.D.SULTAN SHERIFF DR.K.GUNANITHI
3	5.4.2017 Wednesday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	DR.S.SAKTHI DASAN DR.S.SALEEM BASHA DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : NUCLEOTIDE CHEMISTRY & METABOLISM	DR.D.SULTAN SHERIFF DR.K.GUNANITHI
4	6.4.2017 Thursday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD	DR.S.SAKTHI DASAN DR.S.SALEEM BASHA DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : NUCLEOTIDE CHEMISTRY & METABOLISM	DR.D.SULTAN SHERIFF DR.K.GUNANITHI


5	10.4.2017 Monday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS : CELL CYCLE & STRUCTURE OF NUCLEIC ACIDS	ALL FACULTIES
6	11.4.2017 Tuesday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS : CELL CYCLE & STRUCTURE OF NUCLEIC ACIDS	ALL FACULTIES
7	12.4.2017 Wednesday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS : CELL CYCLE & STRUCTURE OF NUCLEIC ACIDS	ALL FACULTIES
8	13.4.2017 Thursday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (CREATININE) IN BLOOD - JAFFES METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS : CELL CYCLE & STRUCTURE OF NUCLEIC ACIDS	ALL FACULTIES
9	17.4.2017 Monday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	DR.S.SALEEM BASHA MR.K.P.SHIVA GOVINDAN DR.M.SARAVANA KUMAR DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : DNA REPLICATION & REPAIR	DR.D.SULTAN SHERIFF DR.S.SAKTHI DASAN DR.K.GUANNITHI
10	18.4.2017 Tuesday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	DR.S.SALEEM BASHA MR.K.P.SHIVA GOVINDAN DR.M.SARAVANA KUMAR DR.N.HARI BABU DR.S.SAKTHI GNANAVEL

10	18.4.2017 Tuesday	2. CHARTS & TUTORIALS : DNA REPLICATION & REPAIR	DR.D.SULTAN SHERIFF DR.S.SAKTHI DASAN DR.K.GUANNITHI
11	19.4.2017 Wednesday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	DR.S.SALEEM BASHA MR.K.P.SHIVA GOVINDAN DR.M.SARAVANA KUMAR DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : DNA REPLICATION & REPAIR	DR.D.SULTAN SHERIFF DR.S.SAKTHI DASAN DR.K.GUANNITHI
12	20.4.2017 Thursday	DEMONSTRATION : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	DR.S.SALEEM BASHA MR.K.P.SHIVA GOVINDAN DR.M.SARAVANA KUMAR DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : DNA REPLICATION & REPAIR	DR.D.SULTAN SHERIFF DR.S.SAKTHI DASAN DR.K.GUANNITHI
13	24.4.2017 Monday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	DR.S.SALEEM BASHA MR.K.P.SHIVA GOVINDAN DR.M.SARAVANA KUMAR DR.N.HARI BABU DR.S.SAKTHI GNANAVEL
		2. CHARTS & TUTORIALS : TRANSCRIPTION & TRANSLATION	DR.D.SULTAN SHERIFF DR.S.SAKTHI DASAN DR.K.GUANNITHI
14	25.4.2017 Tuesday	1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS : TRANSCRIPTION & TRANSLATION	ALL FACULTIES

15	26.4.2017 Wednesday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS ; TRANSCRIPTION & TRANSLATION	ALL FACULTIES
16	27.4.2017 Thursday	UNKNOWN SAMPLE : 1. ESTIMATION OF BIOCHEMICAL ANALYTE (UREA) IN BLOOD - DAM TSC METHOD :	ALL FACULTIES
		2. CHARTS & TUTORIALS ; TRANSCRIPTION & TRANSLATION	ALL FACULTIES

All Teaching Staff

1. Dr D.Sultan Sheriff
2. Dr.S.SakthiDasan
3. Dr.K.Gunanithi
4. Dr.S.SaleemBasha
5. Mr.k.P.ShivaGovindan
6. Dr.N.HariBabu
7. Dr. Mr.Saravana Kumar
8. Dr.S.SakthiGnanavel


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