

YEARLY LESSON PLANNER FOR M.B.B.S 1st Year (2018-19)

Department of Biochemistry

LECTURE No.	Date	Title/Topic	Topic to be covered (in detail)	Lect.by
1	1st week 8-1-19 Tuesday	C E L L B I O C H E M	Biochemical composition and functions of the cell	Dr.Samra
2	9-1-19 Wednesday		Cell membranes and their chemical composition	-do-
3	10-1-19 Thursday		Importance of lipids and proteins in cell membranes	-do-
4	11-1-19 Friday		Chemistry of signals and receptors	-do-
5	2nd week 15-1-19 Tuesday		Signal transduction	-do-
6	16-1-19 Wednesday		Membrane transport including active transport, passive transport	-do-
7	17-1-19 Thursday		Membrane transport including simple and facilitated diffusion	-do-
8	18-1-19 Friday		Methods to study cell biochemistry	-do-
9	3rd week 22-1-19 Tuesday	Acid Base Balance and Body Fluids	Ionization of water, weak acids and bases, pH and pH scale	Dr.Saleem & Dr.Talmeez
10	23-1-19 Wednesday		pK values, dissociation constant and titration curve of weak acids	-do-
11	24-1-19 Thursday		Body buffers and their mechanism of action	-do-
12	4th week 28-1-19 Monday		CLASS TEST	-do-
13	29-1-19 Tuesday		Acid base regulation in human body & Henderson – Hesselbach equation	-do-
14	30-1-19 Wednesday		Biochemical mechanisms for control of water and electrolyte balance	-do-
15	31-1-19 Thursday		Types of particles in solution(Colloids/Crystaloids) Classification of Particals	Dr.Samra
16	5th week		Importance of selectively permeable membranes,	Dr.Samra

	6-2-19 Wednesday		osmosis and osmotic pressure Gibbs-Donnan's Equilibrium		
17	7-2-19 Thursday	CARBOHYDRATES TEST CHEMISTRY	surface tension, Emulsions, viscosity also in relation to body fluids	-do-	
18	6th week 11-2-19 Monday		CLASS TEST		
19	12-2-19 Tuesday		Carbohydrates definition, their biochemical function and classification & Monosaccharides-Nomenclature	Dr. Shamim	
20	13-2-19 Wednesday		Monosaccharides-Isomerism	-do-	
21	14-2-19 Thursday		Chemical properties of Monosaccharides	-do-	
22	15-2-19 Friday		Structure, functions and derivatives of imp. monosaccharides	-do-	
23	7th week 20-2-19 Wednesday		Structure and function of oligosaccharides and disaccharides	-do-	
24	22-2-19 Friday		Polysaccharides and their biochemical role- Homopolysaccharides	Dr. Saleem/ Dr. Talmeez	
25	8th week 27-2-19 Wednesday		Heteropolysaccharides-GAG'S	-do-	
26	9th week 5-3-19 Tuesday		Glycoconjugates (proteoglycans/Glycoproteins)	-do-	
27	6-3-19 Wednesday		Mucopolysaccharidosis	-do-	
28	7-3-19 Thursday		Amino Acids and Proteins	Proteins and their biochemical importance	Dr. Saleem/ Dr. Samra
29	8-3-19 Friday			Classification of Amino acids: standard/Non-standard Essential/Non-Essential, Polar/Non-polar, α/β Amino acids, Peptide bond	-do-
30	10th week 11-3-19 Monday			CLASS TEST	
31	12-3-19 Tuesday	Classification of Proteins-Structural (Simple/compound/Derived Proteins)		-do-	
32	13-3-19 Wednesday	Classification of Proteins-Functional		-do-	
33	14-3-19 Thursday	Compound/Conjugated Proteins		-do-	
34	15-3-19 Friday	Derived Proteins-(Primary/Secondary derived)		-do-	
35	11th week	Three dimensional structure of Proteins Primary and		-do-	

	18-3-19 Monday		secondary		
36	19-3-19 Tuesday		Tertiary and Quaternary structure of Proteins and bonding forces	-do-	
37	22-3-19 Friday		Amphoteric properties of A.A.&proteins	-do-	
38	12th week 27-3-19 Wednesday		Haemoglobin structure	-do-	
39	28-3-19 Thursday		Haemoglobinopathies	-do-	
40	29-3-19 Friday		Collagenopathies(Scurvey,Marfansyndrome,osteogenesis imperfect),abnormal intracellular deposits of proteins)	-do-	
41	13th week 9-4-19 Tuesday		Immunoglobulins structure and functions	-do-	
42	10-4-19 Wednesday		Plasma proteins	-do-	
43	11-4-19 Thursday		Protein separation techniques (Electrophoresis/Isoelectrc Focusing/Chromatography) Amino acid titration	-do-	
44	12-4-19 Friday	Nucleotide and Nucleic Acids	Nucleotides and their biochemical role.	Dr.Shamim	
45	14th week 15-4-19 Monday		. Structure, function and biochemical role of nucleotides	-do-	
46	16-4-19 Tuesday		Synthesis of purines and pyrimidines and their clinical role	-do-	
47	17-4-19 Wednesday		. Structure, function and types of nucleic acids	-do-	
48	18-4-19 Thursday		DNA	-do-	
49	19-4-19 Friday		RNA	-do-	
50	15th week 23-4-19 Tuesday		Lipids	Classification of lipids and their biochemical functions	Dr.Saleem/ Dr.Talmeez
51	24-4-19 Wednesday			Structure and biochemical function of phospholipids, glycolpids, and sphingolipids	-do-
52	25-4-19 Thursday	Classification of fatty acids and their biochemical functions		-do-	
53	26-4-19 Friday	Functions of essential fatty acids		-do-	
54	10-4-19 Friday	Eicosanoides and their function in health and disease		-do-	
55	16th week		TERM TEST		

	29-4-19 Tuesday				
56	17th week 2-5-19 Thursday		Cholesterol, its structure chemistry and function	-do-	
57	3-5-19 Friday		Lipid peroxidation and its significance	-do-	
58	18th week 7-5-19 Tuesday		Lipoprotein Structure	-do-	
59	8-5-19 Wednesday		Fatty Liver	-do-	
60	9-5-19 Thursday	Enzymes	Enzyme-Nomenclature	Dr.Talmeez Dr.Shamim	
61	10-5-19 Friday		Classification of Enzymes	-do-	
62	19th week 13-5-19 Monday		CLASS TEST		
63	14-5-19 Tuesday		Properties of Enzymes	-do-	
64	15-5-19 Wednesday		Enzymes and catalysts	-do-	
65	16-5-19 Thursday		Function of enzymes and catalysts	-do-	
66	17-5-19 Friday		Co-enzymes and co-factors	-do-	
67	20th week 21-5-19 Tuesday		Iso-enzymes and their clinical importance	-do-	
68	22-5-19 Wednesday		Factors affecting enzyme activity (Michaelis – Menten and Lineweaverbuk	-do-	
69	23-5-19 Thursday		Regulation of enzyme Activity	-do-	
70	24-5-19 Friday		Classification of enzyme inhibitors and their biochemical importance	-do-	
71	21st week 27-5-19 Monday		Therapeutic use and application of enzymes in clinical diagnosis	-do-	
72	28-5-19 Tuesday		Enzyme Deficiency Diseases	-do-	
73	29-5-19 Wednesday		Haemoglob in Metabolism	Porphyryns	Dr.Saleem
74	30th-05-19 Thursday			Metabolism of haem	-do-
			Eid Vacations		

75	22nd Week 11-6-19 Tuesday		Synthesis and structure of haemoglobin	Dr.Samra
76	12-6-19 Wednesday		Types and function of haemoglobin	-do-
77	13-6-19 Thursday		O ₂ binding capacity of haemoglobin and factors regulating & affecting it	-do-
78	14-6-19 Friday		Breakdown of haemoglobin, formation of bile pigments their transport and excretion	-do-
79	23rd week 18-6-19 Tuesday		Biochemical causes of hyper-bilirubinaemia and differentiation between different types of jaundice	-do-
80	19-6-19 Wednesday		Causes and types of haemoglobinopathies	-do-
81	20-6-19 Thursday		Porphyrias	Dr.Saleem
82	21-6-19 Friday		Porphyrias	-do-
83	24th week 25-6-19 Tuesday	Vitamins	Classification of vitamins, their chemical structure & biochemical function	Dr.Saleem Dr.Talmeez
84	27-6-19 Thursday		Daily requirements, sources, functions and deficiency effects of fat soluble vitamins-Vitamin A	-do-
85	28-6-19 Friday		Vitamin A	-do-
86	25th Week 3-7-19 Wednesday		Vitamin D	-do-
87	4-7-19 Thursday		Vitamin E and Vitamin k	-do-
88	5-7-19 Friday		Water soluble Vitamins-Vitamin C & B12(Thiamine)	-do-
89	26th Week 8-7-19 Monday		Vitamin B2(Riboflavin),B3(Niacin)	-do-
90	9-7-19 Tuesday		Pantothenic acid and Biotin	Dr.Talmeez
91	10-7-19 Wednesday		Folic acid and Cobalamin(B12)	-do-
92	11-7-19 Thursday		Revision of Vitamins	-do-
93	12-7-19 Friday		Class Assignment: Fat soluble Vitamins	-do-

94	27th Week 16-7-19 Tuesday		Minerals: Iron Iron	Dr.Saleem & Dr.Samra
96	17-7-19 Wednesday		Copper	-do-
97	18-7-19 Thursday		Calcium	-do-
98	19-7-19 Friday		Calcium	-do-
99	28th Week 23-7-19 Tuesday		Phosphorus	-do-
100	24-7-19 Wednesday		Iodine, Manganese	-do-
101	25-7-19 Thursday		Zinc, Molybdenum, Selenium	-do-
102	26-7-19 Friday		Fluoride, Chromium, Nickel	-do-
103	29th Week 30-7-19 Tuesday		Silicon , Aluminium , Cobalt, Sulphur, Boron	-do-
104	31-7-19 Wednesday		Revision of all minerals	-do-
105	1-08-19 Thursday		Nutrition	Dr.Shamim
106	2-08-19 Friday		Nutrition	-do-
107	6-08-19 Tuesday		Nutrition	-do-
109	7-08-19 Wednesday		Nutrition	-do-
110	19-08-19 Monday		Class Test	