

Curriculum plan (Even Semester 2022-23)

Teacher Name: Dr. K. Vandana Rani

Paper name: ZH Core course X: Biochemistry of Metabolic Processes

Class type: Theory

Paper shared with: NA

Unit to be taken	Allocated lectures	Month wise schedule to be followed	Tests/Assignments/Revision/Presentations etc
Unit 1: Carbohydrate Metabolism Sequence of reactions and regulation of i) glycolysis, ii) Citric acid cycle, iii) Phosphate pentose pathway, iv) Gluconeogenesis, v) Glycogenolysis and vi) Glycogenesis	1	i) 21st -23th Aug2023 ii) 28th -30 th Aug 2023 iii) 4th -6th sep 2023 iv)11th – 12th sep 2023 v) 18th - 20 th sep 2023 vi) 25th-27th Sep 2023	Tests/ Assignments September2023
Unit2: Lipid Metabolism i)β-oxidation and omega -oxidation of saturated fatty acids with even and ; iii)Biosynthesis of palmitic acid; iv) Ketogenesis		i) 30 th Sep-4th Oct 2023 ii) 9th -11 rd Oct 2023 iii) 16 th -18 th Oct 2023	
Unit 3: Protein Metabolism i)Transamination ii)Deamination iii)Urea Cycle		i)23rd-25 th Oct 2023 ii)30 th Oct- 1 st Nov 2023	
Unit 4: Oxidative Phosphorylation: i)Redox System, Mito respiratory chain, ii) Electron carriers,ATP production, iii)oxidative Phosphorylation Chemiosmotic hypothesis iv)Mito Shuttle system		i)6 th Nov- 29 Nov 2023	Tests/ Assignments November 2023
Unit 5: Liver as metabolic Hub i)Interconnection of glucose 6 p, pyruvate and acetyl CoA ii)Fate of aa, Fatty acid and glucose in liver iii)Cascade of metablic events in fastin and starvation		4th Dec-11 th Dec 2023	

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Signature

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Class type: Practical (ALL)

Paper shared with: Dr. Rani

Unit to be taken	Allocated lectures	Month wise schedule to be followed G2 Group	Tests/Assignments/ Revision/ Presentations etc
1. Estimation of total protein in given solutions by Lowry's method	4	24.08.2023/31.08.2023	
2. Detection of SGOT and SGPT or GST and GSH in serum/ tissue	4	07.09. 2023/14.09.23	
3. To study the enzymatic activity of Trypsin and Lipase	4	21. 09.23-28.09.2023	Presentation
4. Study of biological oxidation (SDH) [goat liver]	4	05.10.23/12.10.22	
5. To perform the Acid and Alkaline phosphatase assay from serum/ tissue.	4	19. 10.23/26.10.2023	
6. To perform the GSH and GST assay from serum/ tissue.	4	02. 11.23/09.11.2023	
7. Dry Lab: To trace the labelled C atoms of Acetyl-CoA till they evolve as CO ₂ in the TCA cycle	4	16. 11.23/23.11.23	Viva
Moc exam & Revision		30.11.2023-7. 12.23	File Evaluation

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