**Course Title: Medical Biochemistry II**

**DT 2nd, Sec A**

**Lab Assignment**

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**Note: Avoid copy paste material, as it may deduct your marks.**

Q1. Explain the process of Uric Acid Formation.

Q2. Discuss all the protein complexes used in Electron transport chain.

**Q1. Explain the process of Uric Acid Formation.**

Answer:-. Uric Acid formation,

 Uric acid is make from metabolic change of either exogenous or endogenous purines in the liver and intestine. It is make by the enzyme xanthine oxidase, which oxidizes xanthine into uric acid. Humans make only small quantities of uric acid. The excess aggregation leads to a type of arthritis known as gout. Uric acid is the final product of purine metabolism in human beings. The making of uric acid is through the enzyme xanthine oxidase, which oxidizes oxypurines. Naturally a small amount of uric acid is present in the body. When there is an lack amount in the blood it is called hyperuricemia and this can lead to gout and formation of kidney stones. About two-thirds of total body urate is make endogenously, while the carray on one-third is due to dietary purines. Foods rich in purine include meat, poultry, mashrooms seafoods cawliflower and spinach. Uric acid can also formed by fructose, which is makes both from nucleotide turn over and from grow synthesis from amino acid precursors. The urate pool averages about 1200 mg in healthy men.

**Q2. Discuss all the protein complexes used in Electron transport chain.**

**Answer :- proteins complex in the ETC:-**

There are 4 protein complex that are part of the electron transfer chain that function to pass electron in the chain . A 5th protein complex serve to transfer hydrogen ions back into matrix. These complex are embedded within the interior mitochondrial membrane

**These are four complex**

**1) complex I) :-** NADH convey 2 electron to complex I resulting in 4 H+ ions pushed across the interior membrane. NADH is oxidized to NAD+ which is recycled back into kreb cycle. Electron are convey from complex I to a Carrier molecule ubiquinone (Q) or coQ. Which is deceased to ubiquinol ubiquinol Carries the electron to complex III.

**2) complex II:-**

FADH convey electron to complex II and the electron are passed along to ubiquinone (Q). Q is decrease to ubiquinone which carries the electron to complex III. NOH+ ions are convey to the interior membrane space in the process.

3**) complex III**

 The transit to complex III drives the convey of 4 more H+ ions across the interior membrane.while electron are passed to another electron carries protein cytochrome C.

**4) complex IV**

Cytochrome C move electron to the final protein complex in the chain. Complex IV 2 H+ ions or pushed across the interior membrane the electron then move from complex IV to an oxygen O2 molecule causing the molecule to cut. The resulting o2 atom fast grab H+ ions to from 2 molecule of H2o.