

**DKM COLLEGE FOR WOMEN (AUTONOMOUS),VELLORE.**

**DEPARTMENT OF FOODS AND NUTRITION**

**BIOCHEMICAL BASIS OF NUTRITION**

**CLASS : I MSC**

**UNIT – I**

**SECTION-A**

**6 MARKS**

1. Enzymes and co-enzymes involved in oxidation and reduction.
2. Role of respiratory chain
3. Phosphates in biologic oxidation and energy capture
4. Mechanism of phosphorylation

**SECTION-B**

**15 Marks**

1. Enzymes and co-involved in oxidation and reduction and role of respiratory chain and mechanism of phosphorylation.

**UNIT – II**

**SECTION-A**

**6 Marks**

1. Disorders of carbohydrate metabolism – galactosemia and abnormal level in blood glucose

**SECTION-B**

**15 Marks**

1. Glycolysis, TCA cycle and HMP shunt
2. Disorders of carbohydrate metabolism – glycogen storage disease, pentosuria, galactosemia and abnormal level in blood glucose.

**UNIT – III**

**SECTION-A**

**6 Marks**

1. Biosynthesis and oxidation of saturated and unsaturated fatty acids.
2. Explain glycerides, phospholipids and cholesterol
3. Bioenergetics and disorders of lipoproteins and their significance
4. Disorders of lipid metabolism

**SECTION-B**

**15 Marks**

1. Biosynthesis and oxidation of saturated and unsaturated fatty acids, glycerides, phospholipids and cholesterol.
2. Disorders of lipid metabolism, lipoproteins and their significance

**UNIT – IV****SECTION-A****6 Marks**

1. Biosynthesis of protein
2. General catabolism of aminoacids, deamination, transamination
3. Urea cycle
4. Disorders of aminoacid metabolism – cystinuria, albinism, alkaptonuria.

**SECTION-B****15 Marks**

1. Biosynthesis of protein, general catabolism of aminoacids, deamination, transamination, urea cycle.
2. Disorders of aminoacid metabolism – phenylketonuria, cystinuria, albinism, alkaptonuria

**UNIT – V****SECTION-A****6 Marks**

1. Biosynthesis of purine and pyrimidine nucleotides
2. DNA replication and repair
3. Biochemical importance of cycle AMP – gout, aciduria, xanthinuria
4. Structure and properties of DNA, RNA, Mrna, Trna, rRNA.
5. DNA replication and repair

**SECTION-B****15 Marks**

1. Biosynthesis of purine and pyrimidine nucleotides and biochemical importance of cycle AMP
2. Disorders of purine *and pyrimidine metabolism* – gout, aciduria and xanthinuria.
3. *Structure and properties of DNA, RNA, Mrna, Trna, rRNA*