Unit-2: Metabolism I

1. Glycolysis and TCA cycle - pathway and significance.
2. Gluconeogenesis, pentose phosphate pathway
3. Glycogenesis, Glycogenolysis- pathway and significance.
4. Energetic of glycolysis and TCA cycle.

Unit-3: Metabolism II

1. Fatty acid biosynthesis, β-oxidation,
2. Ketone body synthesis and significance.
3. Synthesis and function of cholesterol,
4. Ketogenic and glucogenic amino acids, Transamination and Deamination, Urea cycle.

Paper-5B (Practical)

HP-301M

Full marks-25 (Internal assessment-05; End Sem. Exam. -20)

Sl. No	Practical	Mark
1.		
2.		
3.	Laboratory Note book	
4.	*Viva voce*	
TOTAL		**20**

CONTENTS:

1. Qualitative identification of physiologically important substances – HCL, Lactic acid, Uric acid, Albumin, Peptone, Starch, Dextrin, Glucose, Fructose, Lactose, Maltose, Sucrose, Bile salt, Acetone, Glycerol, urea.

Semester-VI

Paper- 6A (Theory)

HP-302M

Full marks-75 (Internal assessment-30; End Sem. Exam. -45)

Unit-1: Excretory System-I

1. Histology, Structural and Anatomy of kidney and nephron. Glomerular filtration, GFR, measurements, regulation.
2. Juxta-glomerular apparatus.

3. Formation of hypotonic and hypertonic urine formation, Counter-current mechanism.
4. Non-excretory functions of kidney.

Unit-2: Excretory System-II

1. Regulation of acid-base balance of the body- Role of kidney.
2. Physiology of urinary bladder and micturition.
3. Normal and abnormal constituents of urine, and pathophysiological significance.
4. Renal function tests. Disorders of renal functions. Artificial kidney.

Unit-3: Body temperature regulation

1. Histology and functions of skin.
2. Skin wounds, classification and phases and mechanisms of wound healing.
3. Sweat glands –structure and composition of sweat.
4. Mechanism of sweat formation, secretion and its regulation. Insensible perspiration. Heat Stress, Pyrexia, hyperthermia and hypothermia.

Paper-6B (Practical)

HP-302M

Full marks-25(Internal assessment-10; End Sem. Exam. -15)

Sl. No	Practical	Mark
1.		
2.		
3.	Laboratory Note book	
4.	*Viva voce*	
TOTAL		**20**

CONTENTS:

1. Study of Models for anatomical position and functions of organs of digestive system and excretory system and skin.
2. Study and identification of histological slides of digestive system and excretory system.
3. Urine analysis: Identification of abnormal constituents of urine (albumin, ketone, glucose, bile salt).
4. Preparation of buffer solution and determination of pH.