

## **Paper-4B (Practical)**

### **HP-202M**

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

<b>Sl. No.</b>	<b>Practical</b>	<b>Marks</b>
<b>1.</b>		
<b>2.</b>		
<b>3</b>		
<b>4.</b>		
<b>5.</b>	Laboratory Note book	
<b>6.</b>	<i>Viva voce</i>	
<b>TOTAL</b>		<b>20</b>

#### **CONTENTS:**

1. Determination of breathing rate.
2. Measurement of lung volumes and capacities by spirometer or supplied curve.
3. Determination of obstructive or restrictive lung diseases from the supplied chart of FVC–FEV1 measurement.
4. Determination of Peak Expiratory Flow Rate and interpretation of result.
5. Determination of VO<sub>2</sub> max by Queens College step test.

## **3<sup>rd</sup> YEAR**

### **Semester-V**

## **Paper- 5A (Theory)**

### **HP-301M**

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

#### **Unit-1: Digestion & Absorption**

1. Anatomy and histology of alimentary tract & digestive glands.
2. Mechanism of swallowing, Movements of alimentary canal. Peristalsis.
3. Composition and function of salivary, gastric, pancreatic and intestinal juice and bile. Digestion and absorption of carbohydrates, proteins and fats.
4. Gastro-intestinal hormones. Bile and its functions, enterohepatic circulation of bile salts.
5. Vitamins & minerals-sources, functions and deficiency symptoms.

### **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,  $\beta$ -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)**

<b>Sl. No</b>	<b>Practical</b>	<b>Mark</b>
<b>1.</b>		
<b>2.</b>		
<b>3.</b>	Laboratory Note book	
<b>4.</b>	<i>Viva voce</i>	
<b>TOTAL</b>		<b>20</b>

#### **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.