3.	Laboratory Note book	
4.	*Viva voce*	
TOTAL		**20**

CONTENTS:

1. Identification of different pulse and diurnal variation.
2. Determination of pulse rate in different posture.
3. Determination of arterial blood pressure by sphygmomanometer.
4. Measurement of PFI by Harvard step test (modified) and graphical presentation of the recovery heart rate.
5. Measurement of hand grip strength by hand grip dynamometer.

Semester-IV
Paper- 4A (Theory)
HP- 202M
Full marks-75(Internal assessment-30; End Sem. Exam. -45)

Unit 1: Respiratory System-I

1. Functional Anatomy and histology of the lung and airways. Alveolar cells and functions.
2. Physical principles of gas exchange, Partial pressure and composition of normal atmospheric gases in inspired, expired, alveolar airs and blood.
3. Transport of blood gases: Oxygen transport-mechanism and carbon- di-oxide transport, mechanism.
4. Obstructive & Restrictive lung disease-Asthma, Emphysema. Asphyxia, Cyanosis. Dyspnoea, -brief idea.

Unit-2: Respiratory System-II

1. Spirometry: Lung volumes and capacities.
2. Mechanism of respiration. Alveolar surface tension and surfactant.
3. Regulation of respiration: Respiratory centers, Chemoreceptors.
4. Neural control and chemical control of respiration.

Unit-3: High Altitude, Deep sea and Exercise Physiology

1. Respiratory abnormalities: High Altitude Sickness- Acclimatization. High altitude pulmonary edema (HAPO). Oxygen therapy.
2. Decompression sickness- caisson's disease -cause, effect. Hypoxia- Types.
3. Effect of exercise on respiratory system.
4. Maximal aerobic power (VO_2 max) definition and significance. O_2 debt-lactic and alactic.

Paper-4B (Practical)

HP-202M

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

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

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_2 max by Queens College step test.

3rd 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.