



Human Physiology-I
Title: Human Physiology I
Subject Code: 231 PHL
Semester: Third Semester (Second Year).
Duration: 2 + 0 Units (2 contact hours) per week.
Aims: To provide basic knowledge on cell physiology, hematology, physiology of autonomic and central nervous systems, cardiovascular and respiratory systems.
Objectives: At the end of the course the student shall be able to know the physiology of cell, muscle and nerve, blood, autonomic and central nervous systems, equilibrium, cardiovascular and respiratory systems.
Contents: Lectures: <ul style="list-style-type: none">• Structure of cell- its components and their functions.• Elementary tissues of the human body - epithelial, connective, muscular and nervous tissues-their sub-types and characteristics.• Composition and functions of blood and its elements, haemopoiesis, blood groups and their significance, clotting factors, mechanism of coagulation and platelets.• Autonomic nervous system (ANS) – Physiology and functions of sympathetic & parasympathetic nervous system, mechanism of neurohumoral transmission in ANS.• Central Nervous system (CNS) – Physiology and function of cerebrum, cerebellum, mid brain, thalamus, hypothalamus and basal ganglia, spinal cord - structure & reflexes, cranial nerves - names and functions.



- Special senses - eye, ear, skin, tongue & nose.
- Physiological properties of skeletal muscle.
- Functions of heart, blood vessels and circulation, electrocardiogram (ECG), cardiac cycle and heart sounds, blood pressure – its maintenance and regulation.
- Physiology of respiration and regulation of respiration, transport of respiratory gases, respiratory volumes and capacities.

Practical:

RBC count, Total leucocyte count (TLC), Differential leucocyte count (DLC), packed cell volume, Erythrocyte sedimentation rate (ESR), hemoglobin estimation, red cell indices, determination of clotting and bleeding time (CTBT), blood grouping and Rhesus factor.

Minimum course requirements: 30 (2 x 15) Unit lectures (30 contact hours) per level.

Evaluation methods:

- Quizzes	15%
- Mid term examination	25%
- Final examination (written)	60%

Text Books (latest editions):

- 1- Medical Physiology, Guyton Eonuse.
- 2- Concise Human Physiology, Sukar.

Recommended books (latest editions):



- 1- Textbook of Physiology, Donald Doglas.
- 2- Laboratory Atlas of Anatomy and Physiology, Eder, D.J., Mosby-
Year Book, Inc.
- 3- Physiology, John E. Hall.
- 4- Review of Medical Physiology, William F. Ganong.
- 5- Human Physiology, Davies.