

Human Anatomy and Physiology [HAP]

S.E. Sem. III [BIOM]

EVALUATION SYSTEM

	Time	Marks
Theory Exam	3 Hrs.	100
Practical & Oral Exam	–	25
#Oral on Hospital Visit	2 Hrs.	50
Term Work	–	25

SYLLABUS

Anatomy :

- 1. Cell :** Structure and functions of cell. Polarization and depolarization of cell.
- 2. Body Structure :** Basic tissues and their functions in brief, Outline of structures of the following system. Cardiovascular System, Respiratory System, Alimentary System, Central Nervous System, Reproductive System, Urinary System, Skeletal System, Muscular System, Endocrine System, Special Organs – Eye and Ear, Integumentary system (Skin Study).

Physiology :

- 1. Cardiovascular System :**
Heart, Conductive tissues of heart, Cardiac cycle, Heart Valves, System and Pulmonary Circulation, Transmission of Cardiac Impulse, Blood Pressure, ECG (Einthoven's Triangle, Various leads and Waveforms).
- 2. Respiratory System :**
Respiration external (ventilation) Exchange in gases in the alveoli, Artificial respiration. Spiro meter (Forced expiratory volumes) peak flow meter.
- 3. Alimentary System :** All organs of the digestive system, other secretions and main functions, Deglutition and defecation.
- 4. Blood :** Composition of blood–Blood cells and their functions. Cell counting, Hemoglobin, Blood groups, Coagulation, Blood transfusion.
- 5. Excretory System :** Structure of Nephron, formation of urine and function of Kidney, Urinary Bladder, urethra, internal/external sphincters.
- 6. Nervous System :** Different parts, their functions. Reflex actions and reflex arc, Function of Sympathetic and Parasympathetic nervous system. Nerve conduction and action potentials.
- 7. Reproductive System :** (Male and Female) Different organs and their functions. Main actions of Androgens, Oestrogens and Progesterone.
- 8. Endocrine System :** All glands, their secretions and functions. Control of secretions.
- 9. Eyes and Ears :** Eyes–Structure, Refractive Media of the eye, formation of image on the Retina, Ophthalmoscope. Ear – Structure of Cochlea, Hearing mechanism, type of Deafness. Hearing aid.
- 10. Muscle physiology and aspects of skin resistance.**

Reference :

1. Anatomy and Physiology in Health and Illness (*Roos and Wilson*) ELBS Publication.
2. Essentials of Anatomy and Physiology (*Elaine N. Marieb*) Pearson Education.
3. Physiology of Human Body (*Guyton*) Prism Book.
4. Review of Medical Physiology (*William Ganong*) Prentice Hall International.
5. Principles of Anatomy and Physiology (*Tortora and Grabowski*) Harper Collin Publication.
6. Anatomy and Physiology (*Elaine N. Marieb*) Pearson Education.

