

SEM - 2

VCC-201

Applied Anatomy and Physiology of Cardiac Technology

Objective - To enable the students to understand the normal functioning of various organ systems of the body, and their interactions.

UNIT - 1 Musculo-Skeletal System and Joints: Introduction, structure of skeleton, divisions of skeletal system. Classification of bones & joints, salient features & functions of bones, structure & organization of skeletal muscle, physiology of muscle contraction,

UNIT – 2 Digestive system: Introduction, basic anatomy of gastrointestinal tract (esophagus, stomach, small intestine, large intestine, liver, gall bladder, pancreas), physiology of GIT. Excretory System: Introduction, Basic anatomy of kidney and associated organs, Nephron- structure & function, Mechanism of Excretion, Urine formation (Glomerular filtration and Tubular reabsorption),

UNIT – 3 **Cardio Vascular System** – Introduction, general anatomy of heart and its functions, anatomy of vascular system (blood vessels), Blood circulation, heart's conduction system, cardiac cycle, heart sounds, blood pressure. **Respiratory System:** Basic anatomy of respiratory system(nose, larynx, trachea, bronchi & lungs), external & internal respiration, respiratory volumes & regulation of respiration.

UNIT – 4 Nervous System: Basic anatomy of brain and spinal cord, major types of cells in nervous system, neurons, divisions of nervous system, mechanism of nerve impulse. Reproductive System: male & female reproductive system, sex hormones, secondary sexual characteristics, spermatogenesis, oogenesis, menstrual cycle, pregnancy, menopause & contraceptive measures.

Endocrine System: Brief introduction about glands and their secretion, classification of glands, endocrine & exocrine hormones (release, secretion, action).

Recommended Books:

- Guyton (Arthur) Text Book of Physiology. Latest Ed. Prism Publishers Chatterjee (C Human
- Physiology Latest Ed. Vol. 1, Medical Allied Agency Choudhari (Sujith K) Concise Medical
- Physiology Latest Ed. New Central Book
- Ganong (William F) Review of Medical Physiology. Latest Ed. Appleton