Human Anatomy BVOCCT-102

**Unit I**

**Organization of the Human Body,** Introduction to the human body, Definition and subdivisions of anatomy, Anatomical position and terminology, Cell - Definition of a cell, shapes and sizes of cells

- Parts of a cell- cell membranes, cytoplasm, sub cellular organelles. Cell Division - Definition and main events in different stages of mitosis and meiosis. Tissues - Tissues of the body

- Definition and types of tissues

- Characteristics, functions and locations of different types of tissues

- Epithelial tissue- definition, classification with examples

- Glands- classification with examples

**Unit II**

**Locomotion and Support (General Anatomy)**

1. **Cartilage - Types with examples**

2. **Skeletal system,** Skeleton - Definition, axial and appendicular skeleton with names and number of bones, Types of bones. Marking of bones. Functions of bones.Development (types and ossification) and growth of bone.Name, location and general features of the bones of the body. Joints - Definition and types of joints with examples. Axes and kind of movements possible. Name, location, type, bones forming, ligaments, movements possible and the muscles producing such movements of the joints of the body. 3. Muscular system , Parts of the Skeletal muscle. Definition of origin and insertion. Classification of muscular tissue. Compartment muscles of upper limb, lower limb, sternocleidomastoid

**Unit III**

**Maintenance of the Human Body**

1. **Cardio-vascular system,** Types and general structure of blood vessels. Structure and types of arteries and veins. Structure of capillaries. Shape, size, location, coverings, external and internal features of heart. Structure of heart wall. Conducting system and blood supply of the heart. The systemic arteries and veins. Name, location, branches and main-distribution of major arteries and veins.

2. **Lymphatic system,** Lymph, lymphatic vessels, name, location and features of the lymphoid organs.

3. **Respiratory system**, Names of organs of respiration, Location and features of nose, pharynx, larynx, trachea, bronchi, lungs and pleura.

4. **Digestive system**, Names of organs of digestion. Location and features of mouth, pharynx, esophagus, stomach, small and large intestines. Location and features of salivary glands, pancreas, liver and gall bladder

**Unit IV**

1.**Urinary system and Reproductive system,** Names of urinary organs, location and features of kidney, ureter, urinary bladder and urethra, Names of male and female organs of reproduction. Location and features of scrotum, testis, epididymis, vas deferens, seminal vesicle, ejaculatory duct, prostate gland, penis and spermatic cord. Location and features of uterus, uterine tube, ovary & mammary gland.

2. **Development**, Gametes, period of gestation, gametogenesis, structure of sperm and ovum, growth of ovarian follicles. Derivatives of germ layers, placenta

**Unit V**

**Control Systems of the Body**

1. **Nervous system,** Sub-divisions of the nervous system Brain - Sub-divisions, location external features of medulla oblongata, pons, midbrain, cerebellum and cerebrum. Spinal cord - Location, extent, spinal segments, external features and internal structure.Location and features of thalamus and hypothalamus.Locations and subdivisions of basal ganglia. Meninges and spaces around them.Name and location of ventricles of brain and circulation of cerebrospinal fluid.Blood supply of the brain and spinal cord. Cranial nerves

2. **Sense organs,** Location and features of the nose, tongue, eye, ear and skin

3. **Endocrine system,** Names of the endocrine glands. Location and features of pituitary, thyroid, parathyroid, suprarenal, pancreas, ovaries and testes. Names of hormones produced by each gland.

**Practical:**

1. Demonstration of parts of microscope and its uses

2. Demonstration of skeleton and joint

3. Demonstration of deltoid and gluteus maximus, Cubital fossa

4. Demonstration of heart and its blood supply, demonstration of major arteries of Upper limb and lower limb, histology of cardiac muscle and histology of vessels

**Recommended Books Recent Editions:**

1. Ross and Wilson: Anatomy and Physiology in Health and illness

2. Understanding Human Anatomy and Physiology, William Davis (p) MC Graw Hill

3. Essentials of Human Embryology. Bhatnagar, Orient Blackswan Pvt. Ltd.

4. Anatomy for B.Sc Nursing by Renu Chauhan. Arichal publishing company 2012

5. Hand book of Anatomy BD Chaurasia

Reference books:

1. B D Chaurasia: Regional Anatomy. Vol I, II, III 6th edition