

# ANATOMY & PHYSIOLOGY SYLLABUS

1. The Skeletal System
2. The Muscular System
3. The Vascular System
4. The Lymphatic System
5. The Respiratory System
6. The Digestive System
7. The Reproductive System
8. The Urinary System
9. The Endocrine System
10. The Cell
11. Tissue

The above systems and their organs including location, structure, function and histology.

## **SKELETAL SYSTEM**

- a. Cartilage, basic structure, function and location
- b. Bone, different types of bone, structure of bone
- c. Location and number of bones as follows
  - Limbs
  - Individual bones of wrist, ankle, hand and foot
  - Pelvic girdle
  - Ribs and Sternum
  - Shoulder girdle
  - Skull
  - Vertebral column
- d. Joints, to include
  - Different types
  - Types of movement
  - Disorders
- e. Cells – Structure, function, histology
- f. Tissues – Structure, function, histology
- g. Skin – Structure, function, histology

## **MUSCULAR SYSTEM**

- a. Cardiac muscles, skeletal muscle, smooth muscle
- b. Muscle name, location, origin, insertion and action
- c. Principle of muscle antagonism
- d. Energy sources and waste products of muscle
- e. Muscle health and circulation
- f. Muscle fibres and muscle tone
- g. Effects of muscle exercise (on muscle and the body as a whole)
- h. Effects of traumatic damage

## **VASCULAR SYSTEM**

- a. Blood composition
- b. Blood vessels, structure and function
- c. Blood and internal respiration
- d. Pulmonary circulation
- e. Systemic circulation
- f. Heart, structure and function (including pacemaker)
- g. Blood flow route through the heart
- h. Relationship of blood circulation to cell health

## **LYMPHATIC SYSTEM**

- a. SECTION A
  - Lymph, composition and function
  - Lymph vessels, location, structure and function
  - Lymphatic circulation
  - Spleen
  - Tonsils and adenoids
- b. SECTION B
  - Immunity
  - Lymphocytes, source and function

## **DIGESTIVE SYSTEM**

- a. Chemistry of the digestive process
- b. Digestive secretions and their functions
- c. The location, structure and function of the following
  - Oral cavity
  - Pharynx
  - Oesophagus
  - Stomach
  - Small intestine
  - Large intestine
  - Liver
  - Gall bladder
  - Pancreas

## **RESPIRATORY SYSTEM**

- a. Muscles of respiration and respiratory movements
- b. Physical principles of gaseous exchanges
- c. Chemical and nervous control of respiration
- d. Pleura and thoracic wall
- e. Bronchi and lungs
- f. Pharynx, larynx and trachea
- g. Nasal cavity and nose
- h. Blood supply

## **REPRODUCTIVE SYSTEM**

- a. The male reproductive system
  - i. Name and location of the glands and related structures
  - ii. Function and effects
  - iii. Hormones and effects
- b. The female reproductive system
  - i. Name and location of the glands and related structures
  - ii. Function and effects
  - iii. Hormones and effects
  - iv. Menstruation, pregnancy and lactation
  - v. Female breast, structure

## **URINARY SYSTEMS**

- a. Kidneys, structure and functions
- b. Urinary production and composition
- c. Urinary flow
- d. Ureters, bladder and urethra
- e. Blood supply

## **ENDOCRINE SYSTEMS**

- a. Name and location of the major glands
- b. Secretions and functions of each gland
- c. Distribution of the hormones
- d. Relationship between the glands
- e. Relationship between the glands and the nervous system
- f. Relationship between the glands and the vascular system

## **NEUROLOGICAL SYSTEM**

- a. Brain
- b. Cranial nerves
- c. Central nervous system
- d. Peripheral nervous system
- e. Autonomic nervous system
- f. Sympathetic nervous system
- g. Parasympathetic nervous system
- h. Spinal cord and spinal nerves
- i. Reflex arc
- j. Motor sensory and associated neurons
- k. Nerve transmission

## **THE SENSORY ORGANS**

- a. Ears – structure and function of each section
- b. Eyes – structure and function of each section
- c. Taste – structure involved
- d. Smell – structures involved and route to the brain
- e. Homeostatic functions as follows
  - i. Maintenance of blood sugar levels
  - ii. Maintenance of water levels
  - iii. Maintenance of oxygen supply
  - iv. Elimination of toxins and waste products
  - v. Relation between cells, tissues, organs, systems and the whole body