# ASSIGNMENT

September 10, 2022

On

## Summary of An Introduction to the Human Body

*Submitted by:* **Rajnish Kumar** Roll No: 21111043


NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR
*Under the Supervision of:* **Saurabh Gupta**

# Contents

# 1 summary

feedback systems, that help restore the conditions needed for health and life. six levels of organization will help you to understand anatomy and physiology: the chemical, cellular, tissue, organ, system, and organismal levels of organization.

## 1.1 Chemical level

This very basic level can be compared to the letters of the alphabet and includes atoms

## 1.2 Cellular level

cells are the smallest living units in the human body. Among the many kinds of cells in your body are muscle cells, nerve cells, and epithelial cells. smooth muscle cell, one of the three types of muscle cells in the body

## 1.3 Tissue level

Tissues are groups of cells and the materials surrounding them that work together to perform a particular function,There are just four basic types of tissues in your body: epithelial tissue, connective tissue, muscular tissue, and nervous tissue.

## 1.4 Organ level

At the organ level, different types of tissues are joined together. organs are structures that are composed of two or more different types of tissues; they have specific functions and usually have recognizable shapes. that reduces friction when the stomach moves and rubs against other organs. Underneath are three layers of a type of muscular tissue called smooth muscle tissue, , the small intestine. The innermost lining is an epithelial tissue layer that produces fluid and chemicals responsible for digestion in the stomach.

### 1.5 System (organ-system) level

A system (or chapter, in our language analogy) consists of related organs (paragraphs) with a common function.also called the organ-system level, is the digestive system,

### 1.6 Organismal level

All the parts of the human body functioning together constitute the total organism.

### 1.7 Homeostasis

is the maintenance of relatively stable conditions in the body's internal environment Homeostasis in the human body is continually being disturbed. To maintain the homeostasis boby have feedback system . feedback system is two type positive feedback , negative feedback system . feedback sytem contain receptor, control system and effector. A negative feedback system reverses a change in a controlled condition. a positive feedback system tends to strengthen or reinforce a change in one of the body's controlled conditions.

### 1.8 body Position

Descriptions of any region or part of the human body assume that it is in a standard position of reference called the anatomical position . The regional name are head, neck , trunk, limp,upper limp , lower limp.

### 1.9 planes and sections

A sagittal plane that the vertical plane that devides the body or an organ into right and left sides. and many more planes are midsagittal para sagittal ,transverse plane and oblique plane.

## 1.10 Body Cavities

Body cavities are spaces that enclose internal organs. Bones, muscles, ligaments, and other structures separate the various body cavities from one another . The cavity are such that cranial cavity, thoracic cavity ,pericardial cavity,pleural cavities and abdominopelvic cavity.

## 1.11 Medical Imaging

Medical imaging refers to techniques and procedures used to create images of the human body. Various types of medical imaging allow visualization of structures inside our bodies and are increasingly helpful for precise diagnosis of a wide range of anatomical and physiological disorders. some medical imaging technique are radiography,Magnetic Resonance Image(MRI),Computed Tomography(CT),Ultrasound scanning , Positron emmision tomography(PET) and Radionuclide scanning . All the above technique used for different different type of image .