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| **Week** | **Date of Class** | **Unit to be Covered and/or Other Activity** |  |
| **W1** | **-3-2023** | **Introduction to Human Physiology**:  1.1. Introduction of Physiology  **1.2. Physiology of Body fluids(water) and electrolyte**  1.2.1. Definitions, Composition of body fluids  1.2.2. Types of body fluids,  1.2.3. Electrolytes of the body fluids  1.2.4. Movement of, body fluids  1) Hydrostatic pressure 2) osmotic pressure.  1.2.5 Regulation of Water Output  1.2.6 Disorders of water imbalance. |  |
| **W2** | **-3-2023** | **Physiology of Digestive System**:  2.1. Composition and Functions of Salivary Secretion  2.2. Swallowing  2.3. Gastric Secretion.  2.4. Digestion and Regulate the Secretion.  2.5. Digestion and Absorption in Small Intestine  Secretion, Digestion and Absorption in Large Intestinal, 2.6.  2.7. Function of Liver, Pancreas and Gallbladder  2.8. Movement of Digestive Material  2.9. Control of Digestive Functions |  |
| **W3** | **-3-2023** | **Physiology of Muscular System:**  3.1. Study the general function of the Muscles.  3.2. Types and functions of different parts of these organs.  3.3. Contraction of skeletal muscles.  3.4. Sliding theory and its steps.  3.5. Action potential and ions fluxes.  3.6. muscular performance.  3.7. Muscle tone.  3.8. Source of energy stored in muscles.  3.9. Hormones and muscle. |  |
| **W4** | **-4-2023** | **Physiology of Respiratory system**  4.1. Types of respiration  4.2. Pulmonary ventilation or respiratory cycle  4.3 Factors Control Gases Pressure  4.4. Respiratory Muscles  4.5. Volume of pulmonary air space  4.6. Calculation of pulmonary ventilation in health and disease  4.7. Gases transport  4.8. Factors Affecting the Affinity of Hemoglobin to Oxygen  4.9. control of respiration |  |
| **W5** | **-4-2022** | **Physiology of The Cardiovascular System Part1:**  5.1. Study the functional properties of the heart.  5.2. Action potential of the cardiac muscle.  5.3. Conductivity and conducting system.  5.4. Rhythmicity.  5.5. Cardiac pacemaker.  5.6. Heart rate, factor effecting heart rate.  5.7. Cardiac cycle.  5.8. Heart sound.  5.9. Electrocardiogram. |  |
| **W6** | **-4-2023** | **Physiology of The Cardiovascular System Part II:**  6.1. Study the General function of the Blood Vessels  6.2. Heamodynamic  6.3. Factor effecting of blood flow  6.4. Types of blood flow  6.5. Types of blood pressure  6.6. Regulation of blood pressure  6.6.1. Neuronal  6.6.2. Hormonal |  |
| **W 7** | **-4-2023** | **Physiology of Nervous System:**  7.1. Membrane potential.  7.2. Types of membrane channels.  7.3. Action potential.  7.4. Synapses and Conduction of Nerve Impulses –action potentials.  7.4.1. Types of synapses.  7.4.2. Synapses activity.  7.5. Reflexes.  7.5.1. Component of Neural Reflexes.  7.5.2. Type of Reflexes.  7.5.3. Example of Reflexes.  7.6. Autonomic nervous system  7.7. Support and the protection of the brain |  |
| **W8** | **-5-2023** | **Physiology of The Urinary System**:  8.1. Study the general function of the urinary system  8.2. The blood and nerve supply of the kidney  8.3. The function of the kidney  8.4. Urine formation  8.4.1. Glomerular filtration  8.4.2. Tubular reabsorption and secretion.  8.5. The hormones that influence selective reabsorption.  8.6. Control of blood pressure.  8.7. Micturition |  |
| **W9** | **-5-2023** | **Blood physiology:**  9.1. Overview of Blood  9.2. Gaseous Exchange  9.3. Blood composition  9.3.1. Plasma  9.3.2. Red Blood Cells  9.3.3. White Blood Cells  9.3.4. Platelets  9.4. Hemostasis (Coagulation or Clotting)  9.5. ABO Group System  9.6. Surface Antigens, Inheritance, Compatibility in Blood/Plasma Transfusions  9.7. Hemolytic Disease of the Newborn |  |
| **W10** | **-5-2023** | **Physiology of The lymphatic and immune system**  10.1. Lymph flow  10.1.1, Lymph flow in the lymphatic vessels  10.1.2. Lymph flow in the lymph nodes,  10.2. Function of lymph nodes  10.3. Function of spleen and thymus  10.4. The Defense Mechanisms and Immunity  10.4.1. Non Specific Defense Mechanisms (Innate Immunity =Native Immunity  10.4.1.1. First line  10.4.1.2. Second line  10.5. Specific Defense Mechanisms (Acquired immunity = Adaptive immunity)  10.6. Humeral Immunity (Antibody Mediated Immunity) |  |
| **W11** | **-5-2023** | **Physiology of The Endocrine System:**  11,1. Types of Glands  11.2. Function of endocrine system  11.3. Hormones:  11.3.1 Characteristics of Hormones  11.3.2. Functions of hormones  11.3.3. Classification of hormones  11.4. Mechanism of Hormone Action  11.4.1. Internal receptors  11.4. 2. External receptors  11.5. Endocrine Glands & functions (Hypothalamus, Pituitary Gland, Thyroid Gland, pancreas, Adrenal Glands, Parathyroid Glands, Pineal glands, Gonads Male gonads are known as the testes, and ovaries in case of females. Testes, The placenta. |  |
| **W12** | -6-2023 | **Physiology of female reproductive System**  12.1. The functions of the female reproductive system  12.2. Oogenesis  12.3, Hormonal control of ♀ secondary sex characteristic  12,4, Ovarian cycle  12,5, Uterine Cycle (Menstrual Cycle) and Menstruation  12,6, Fertilization  12,7, Pregnancy  12,8, labor process  12,9, lactation |  |
| **W13** | -6-2023 | **Physiology of Male Reproductive System**  13.1. Function  13.1.1, Spermatogenesis Formation of sperm  13.1.2. Hormonal factors that stimulate spermatogenesis  13,2, Maturation of sperm in the epididymis  13.3. Storage of sperms  13,4, Secretion and function of Male glands  13,4, 1. Function of the seminal vesicles  13,4, 2, Function of the prostate gland  13,5, Semen – the fluid & sperm from the vas deferens  13,6, Capacitation of the spermatozoa  13,7, Testosterone and other male sex hormones |  |
| **W14** | -6-2023 | **Sens physiology**  14.1. Cutaneous sensation  14.2. physiology of vision  14.3. physiology of hearing  14.4. Taste bud physiology  14.5. Smell physiology |  |
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