

CO1.1 HUMAN ANATOMY

S.NO	TOPIC	OUTCOME
1.1.1	GENERAL ANATOMY	<ul style="list-style-type: none">➤ After the completion of the topic , the student shall be able to know the levels of organization in the living world.➤ Know the organization of the human body by cavities and anatomical terminology.➤ Able to Understand the structure of matter and how it relates to cellular metabolism➤ Can Understand the structure and function of a variety of cells contained in the human body.➤ Can be able to Distinguish between groups of cells and tissues.➤ Can relate the components of the integumentary system to the levels of organization.➤ Explain the structure and function of bones.➤ Know the major divisions of the human skeleton.➤ Learn a majority of the human bones by scientific name and location.➤ Name, understand, and show by example the variety of joints in the human skeleton.➤ Know the structure and function of muscles.➤ Distinguish between the three types of muscle tissue.➤ Learn the scientific names and locations of a select group of human muscles.➤ Demonstrate and name muscle and joint actions➤ After completion of the topic the student shall be able to describe the structure and function of a neuron.➤ Understand the steps involved in the transmitting of a nerve impulse.➤ Explain several nerve pathways.➤ Demonstrate several reflex actions on

		<p>another person.</p> <ul style="list-style-type: none"> ➤ Understand the structure and function of the brain and spinal cord. ➤ Identify the various types of sensory receptors. ➤ List and understand the operation of the human senses. ➤ Relate the importance of hormones to the functioning of the human body. ➤ Describe the endocrine glands and the hormones they produce ➤ Know the general structure and function of the alimentary canal. ➤ List the organs of the digestive tract by anatomical location. ➤ Understand the mechanisms of breathing and alveolar gas exchange. ➤ Identify blood cells by type and function. ➤ Know the structure and function of the heart. ➤ Measure pulse and blood pressure. ➤ Distinguish between veins and arteries. ➤ Understand the body's defense mechanisms. ➤ Know the organs of the urinary system. ➤ Understand the process of waste removal in the human body. ➤ Know the male reproductive organs by name and function ➤ Know the female reproductive organs by name and function. ➤ Understand the female menstrual cycle. ➤ Understand the roles of various hormones in the reproductive cycle. ➤ Describe the stages of pregnancy and the birth process.
1.1.2	KINESIOLOGY	<ul style="list-style-type: none"> ➤ After the completion of the topic the student shall be able to understand about the basic structure and function of muscle and joints of the body. shall be able to correlate the joint muscle movement. also the principles of forces and motion along with the forces acting on the human body from

		inside and outside the body during every movement. shall have the understandings of normal posture and the maintenance of posture and the postural muscles.
1.1.3	REGIONAL ANATOMY	<ul style="list-style-type: none"> ➤ After completion of the topic the student shall be able to Explain the structure and function of bones. ➤ Know the major divisions of the human skeleton. ➤ Learn a majority of the human bones by scientific name and location. ➤ Name, understand, and show by example the variety of joints in the human skeleton. ➤ Know the structure and function of muscles. ➤ Distinguish between the three types of muscle tissue. ➤ Learn the scientific names and locations of a select group of human muscles. ➤ Along with the bony skeleton and muscle the student shall have the understandigsof the various soft parts of the body including the various fascia,canals.fossas and able to describe the pathologies related the thesr structures.
1.1.4	DEMONSTRATION	<ul style="list-style-type: none"> ➤ After the lecture demonstration the student shall be able to demonstrate ➤ Muscles of the whole body. Identification of bony prominences on inspection and palpation in the body, especially of extremities. ➤ Points to palpate nerves and arteries. Identification of prominent muscles. ➤ Extra-ocular muscles and salient points about the eye ball.

CO1.2-HUMAN PHYSIOLOGY

S.NO	TOPIC	OUTCOME
1.2.1	GENERAL PHYSIOLOGY	<ul style="list-style-type: none">➤ After studying the topics included in the general physiology the student shall have the understanding functional relationships between various organ systems of the body.➤ Can be able to explain the concept of the internal environment and its regulations by homeostatic mechanisms.➤ Can be able to describe the distribution and composition of body fluids.➤ Can define feedback mechanisms and identify the various components of a control system, shall be able to discuss the physical, chemical and electrical properties of cell membranes so as to identify abnormalities which may alter their functions.
1.2.2	BLOOD	<ul style="list-style-type: none">➤ Can be able to Describes the blood cells, their formation and functions in order to investigation of anaemias, infections and leukaemias➤ Can have the understanding of comparison between plasma protein fractions, their origin and functions so as to understand disturbances of their production.➤ Can able to Classify blood groups so as to identify the blood groups of patients and donors for the purpose of safe blood transfusion.➤ Can be able to explain the mechanisms of haemostasis and blood coagulation so as to be aware by diseases arising from excessive bleeding or intravascular

		clotting.
1.2.3	NERVE	➤ Can be able to explain the ionic basis of the action potential and its propagation in skeletal muscle, heart muscle and nerves so as make use of electrocardiography, electromyography and electroencephalography ,the student shall have the understandings of the functional properties of nerve and neurons and the synapse also the neuro muscular junction.
1.2.4	MUSCLE	➤ After studying the topic the student shall have the understandings of the functional properties of muscle, the structure of muscle and the action potential generated inside the muscle after action potential.
1.2.5	ENDOCRINE SYSTEM	➤ Shall have the understandings of the neural and hormonal control of the pituitary gland and other glands like thyroid parathyroid and adrenal gland by the hypothalamus and inputs from other parts of the nervous system along with the sensory and motor tracts of the body along with the functioning of various areas of the nervous system and their functions.
1.2.6	NERVOUS SYSTEM	➤ After completion of the topic the student shall be able to understand the sensory and motor tracts of the body along with the functioning of various areas of the nervous system and their functions, also have the knowledge of the sensory and motor tracts and their connections with all parts of the brain and spinal cord. an able to coordinate nervous system connections with all parts all parts of the body
1.2.7	SPECIAL SENSES	➤ After completion of the topic the student shall have the understandings of various special senses of the body and their pathways and all the functioning of our special senses.

1.2.8	SKIN AND BODY TEMPERATURE REGULATION	<ul style="list-style-type: none"> ➤ Can be capable to define the basal metabolic rate so as to appreciate different rates of energy expenditure during work and Leisure. ➤ Can be able to Explain the maintenance of a constant body temperature and the balance between Heat-Gain and Heat-Loss. ➤ Shall be able to Explain the thermoregulatory responses to various environmental conditions in order to be aware with abnormalities of heat regulation (e.g. heat-stroke, heat exhaustion and fevers).
1.2.9	AUTONOMIC NERVOUS SYSTEM	<ul style="list-style-type: none"> ➤ After completion of the topic the shall have the understandings of various parts of parasympathetic and sympathetic nervous system and their control on various regulatory mechanisms of the body.also have the knowledge of micturition and defaecation reflex.
1.2.10	CARDIOVASCULAR SYSTEM	<ul style="list-style-type: none"> ➤ Able to discuss the origin and conduction of the cardiac impulse in order to identify conduction defects, arrhythmias etc. shall be able to Describe the changes which take place during the cardiac cycle. ➤ Shall have potential to Describe the haemodynamics (blood flow; pressure and resistance) of the different parts of the ➤ Circulation and their regulatory mechanisms. Shall be able to describe the responses of cardiovascular system to stress, e.g. Exercise, haemorrhage etc.
1.2.11	RESPIRATORY SYSTEM	<ul style="list-style-type: none"> ➤ Shall be able to describe the mechanics of breathing leading to the maintenance of normal respiratory movements ➤ Can explain the regulation of pulmonary blood flow (pulmonary perfusion). ➤ Can explain the mechanisms of gas exchange and carriage between blood, alveolar air, and tissues.

1.2.12	DIGESTIVE SYSTEM	<ul style="list-style-type: none"> ➤ Shall explain the mechanisms of G.I.T. motility in order to understand the pathophysiology of clinical cases of abnormal motility such as colic, diarrhoea, constipation, intestinal obstruction. ➤ Can describe the control of digestive secretions, functions and composition of the different juices and enzymes of the G.I.T. ➤ Shall be able to understand the causation of digestive disturbances such as dyspepsia, peptic ulceration and pancreatic diseases. ➤ Shall be able to identify the role of the liver as a great metabolic factory and storage organ with numerous functions. ➤ Can explain the mechanisms and the role of parts of the G.I.T. in absorption of different (food stuffs) in order to understand the problems of malabsorption.
1.2.13	RENAL SYSTEM	<ul style="list-style-type: none"> ➤ After the completion of the topic the student shall be able to understand the basic structure and functioning of kidney and shall be able to discuss the basic functions of the glomeruli in the formation of glomerular filtrate in order to recognize polyurias of physiological and pathological origins, also have the understanding of the regulatory mechanisms of the kidney in maintain homeostasis.
1.2.14	EXERCISE PHYSIOLOGY	<ul style="list-style-type: none"> ➤ After the completion of the topic the student shall have the understandings of the various physiological changes occurs inside the body during exercise and shall able to co relate the changes with various exercises of the body.

CO1.3- BIO ELECTRICAL MODALITIES-

S.NO	TOPIC	OUTCOME
1.3.1	DC CURRENT	<ul style="list-style-type: none">➤ Student should be able to understand about the wavelength , frequency and its physiological effect on human tissue.
1.3.2	CAPACITOR	<ul style="list-style-type: none">➤ Student should be able to understand about the mechanism of capacitance and its practical implementation in biomechanical modalities and human body.➤ Should understand the series and parallel use of capacitance
1.3.3	RHEOSTAT	<ul style="list-style-type: none">➤ Student should be able to understand about Series and shunt rheostat with application of each in the physiotherapy department
1.3.4	ELECTRIC CURRENT	<ul style="list-style-type: none">➤ Student should be able to understand about the physiological effect of current in terms of chemical,thermal response.➤ Should understand the effect of electric shock, treatment and its complications.

1.3.5	THERAPEUTIC CURRENT	<ul style="list-style-type: none">➤ Student should be able to identify various currents used in electrotherapy their technical specifications and there implementation .
1.3.6	THERAPEUTIC	<ul style="list-style-type: none">➤ Student should be able to identify various currents used in electrotherapy their

	CURRENT	technical specifications and there implementation .
1.3.7	MAGNETISM	<ul style="list-style-type: none"> ➤ Student should be able to understand about the basics of magnetism and there properties . ➤ The polarity and series use of magnet
1.3.8	ELECTROMAGNES-TISM	<ul style="list-style-type: none"> ➤ Student should be able to understand about the production ,physiological effect and implementation in electrotherapy. ➤ Should be able to identify various material with magnetic properties and its electromagnetic wave patterns.

1.3.9	THERMIONIC VALVES	<ul style="list-style-type: none"> ➤ Student should be able to understand about the thermionic emission, role in production of short waves diathermy. ➤ Uses of diode valves in electrotherapeutic modality
1.3.10	SEMICONDUCTOR DEVICES	<ul style="list-style-type: none"> ➤ Student should be able to Differentiate between the conductors ,semiconductor and non conductors ➤ Should be able to understand human tissue in reference of conductors and semi conductors.

	ELECTRONIC CIRCUIT	<ul style="list-style-type: none"> ➤ Student should be able to understand various electronic circuits,resistance and their uses and bioelectrical modality.
1.3.12	AC DC METER	<ul style="list-style-type: none"> ➤ Student should be able to understand Fundamentals of AC DC meter and their

		uses.
1.3.13	ELECTROTHERAPEUTIC MODALITY	<ul style="list-style-type: none">➤ Student should be able to understand➤ Production➤ Physiological effect➤ Therapeutic effect.➤ Indications and contraindication➤ Dangers

CO4-BIOMECHANICAL MODALITY

1.4.1	MECHANICS	➤ Student should be able to understand various mechanical modality.
1.4.2	FORCE	➤ Student should be able to understand Definition and composition of force and implantation in exercise therapy
1.4.3	MOMENTUM	➤ Student should be able to understand the law of momentum.
1.4.4	ACTION & REACTION	➤ Student should be able to understand the principle of action and reaction in terms of LOG AND GRF
1.4.5	FRICTION & ROTATION	➤ Student should be able to understand the principles of friction and the concept of rotation about an axis.
1.4.6	ANGLE OF PULL	➤ Student should be able to understand biomechanics of movement.
1.4.7	ASISTANCE & RESSISTANCE	➤ Student should be able to understand the basics of assistive and resistive forces and its implementation
1.4.8	GRAVITY	➤ Student should be able to understand the Gravity its effect on human body and uses in Exercise therapeutic modality ➤ Student Should be able to understand COG & LOG
1.4.9	EQUILIBRIUM	➤ Student should be able to understand the stability and fixation
1.4.10	ENERGY,WORK	➤ Student should be able to understand about the type of energy used ,definition

	AND POWER	of energy ,work and power.
1.4.11	LEVERS	➤ Student should be able to understand the use of levers in physiotherapy, orders of levers, their advantage and disadvantage.
1.4.12	ELASTICITY	➤ Student should be able to understand the definition, stress and strain ,laws of elasticity and properties of springs and type of materials used in physiotherapy.
1.4.13	MECHANICS OF MOVEMENT	➤ Student should be able to understand the definition of axes and planes their uses in human anatomy .
1.4.14	PULLEYS	➤ Student should be able to understand the use and types of pulleys and their uses in physiotherapy treatment.

C05- PSYCHOLOGY & SOCIOLOGY

GENERAL PSYCHOLOGY

S.NO	TOPIC	OUTCOME
1.5.1	INTRODUCTION TO PSYCHOLOGY	<ul style="list-style-type: none">➤ After the study of this topic the student shall be able to :➤ Define the concept of psychology.➤ Identify its fields and areas of applications.➤ Recognize the methods of study of Psychology
1.5.2	HERIDITY & ENVIRONMENT	<ul style="list-style-type: none">➤ After the study of this topic the student shall be able to :➤ Classify Heredity & Environment➤ Debate on the influence of Heredity & Environment on the individual.
1.5.3	DEVELOPMENT & GROWTH OF BEHAVIOUR IN INFANCY & CHILDHOOD	<ul style="list-style-type: none">➤ After the study of this topic the student shall be able to :➤ Identify the Stages of Development of an individual.➤ Differentiate between the features of Infancy & Childhood➤ Discover the milestones achieved during the stages of Infancy & Childhood
1.5.4	MOTIVATION	<ul style="list-style-type: none">➤ After the study of this topic the student shall be able to understand:➤ Meaning & Sources of Motivation➤ Concepts Social Motives like Achievement, Affiliation & Aggression.➤ Maslow's Need Hierarchy Theory
1.5.5	EMOTIONS & EMOTIONAL DEVELOPMENT	<ul style="list-style-type: none">➤ After the study of this topic the student shall be able to understand :➤ Nature of Emotion➤ Theories of Emotional Development like James Lang, Cannon Bard & Schather &

		Singer
1.5.6	LEARNING	<ul style="list-style-type: none"> ➤ After the study of this topic the student shall be able to understand : ➤ Introduction to the concept of Learning ➤ Classical Conditioning & its laws ➤ Operant Conditioning
1.5.7	LEARNING & MATURATION	<ul style="list-style-type: none"> ➤ After the study of this topic the student shall be able to : ➤ Concept of Reinforcement ➤ Positive & Negative Reinforcement
1.5.8	SENSATION & PERCEPTION	<ul style="list-style-type: none"> ➤ After the study of this topic the student shall be able to understand: ➤ Basic concepts of Sensation & threshold ➤ Process of Sensation ➤ Sensory channels ➤ Process & concepts of Perception
1.5.9	SOCIAL PSYCHOLOGY	<ul style="list-style-type: none"> ➤ After the study of this topic the student shall be able to understand: ➤ Concept of Groups ➤ Types of groups ➤ Concept of Leadership & group psychology
1.5.10	MEMORY, THINKING & CAUSES OF FORGETTING	<ul style="list-style-type: none"> ➤ After the study of this topic the student shall be able to understand: ➤ Basic Processes ➤ Three systems of Memory & factors affecting ➤ Definition & causes of forgetting.

CLINICAL PSYCHOLOGY

S.NO	TOPIC	OUTCOME
1.5.11	INTRODUCTION	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Fields of Application of Clinical Psychology ➤ Origin & history of Clinical Psychology
1.5.12	CONCEPT OF MIND	After the study of this topic the student shall be

		<p>able to understand:</p> <ul style="list-style-type: none"> ➤ Conscious mind ➤ Unconscious mind ➤ Sub conscious mind
1.5.13	INTELLIGENCE	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Introduction to the concept ➤ Theories of Intelligence ➤ Introduction to Mental Retardation ➤ Kinds of mental deficiency
1.5.14	PERSONALITY	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Meaning & Concepts ➤ Psychodynamic Approach ➤ Personality Types ➤ Factor influencing Personality ➤ Personality Tests
1.5.15	MAJOR PSYCHOLOGICAL DISORDERS	<p>PSYCHONEUROSIS After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Concept of neurosis & its types ➤ Therapies/Treatment given <p>ANXIETY After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition & Symptoms of the disorder ➤ Causes ➤ Therapies/Treatment provided. <p>PHOBIA After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms & Types of the disorder ➤ Causes ➤ Therapies/Treatment provided. <p>OBSESSIVE COMPULSIVE DISORDER After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms& Types of the disorder ➤ Causes ➤ Therapies/Treatment provided.

1.5.16	MAJOR PSYCHOLOGICAL DISORDERS	<p>PSYCHOSIS After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms& Types of the disorder ➤ Causes ➤ Therapies/Treatment provided. <p>SCHIZOPHRENIA After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms& Types of the disorder ➤ Causes ➤ Therapies/Treatment provided <p>DEPRESSION After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms& Types of the disorder ➤ Causes ➤ Therapies/Treatment provided.
1.5.17	PSYCHOSOMATIC DISORDERS, PERSONALITY DISORDERS	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Definition ,Symptoms& Types of the disorder ➤ Causes ➤ Therapies/Treatment provided.
1.5.18	FRUSTRATION & CONFLICT	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Concept of Frustration ➤ Types & Causes ➤ Concept of Aggression ➤ Frustration-Aggression Hypothesis ➤ Concept of Conflict ➤ Types & Causes of Conflict
1.5.19	STRESS	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Concept Of Stress ➤ Types & Causes ➤ Coping Mechanisms of Stress
1.5.20	COUNSELING	<p>After the study of this topic the student shall be able to understand:</p>

		<ul style="list-style-type: none"> ➤ Definition & process of counseling ➤ Approaches of Counseling ➤ Stages of counseling
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SOCIOLOGY

S.NO	TOPIC	OUTCOME
1.5.21	INTRODUCTION	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Meaning, Definition & scope of Sociology ➤ Relation of sociology with other disciplines ➤ Methods to study Sociology ➤ Importance/Role of Sociology with Health care professionals.
1.5.22	SOCIAL FACTORS IN HEALTH & DISEASES	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Definition & types of Social factors ➤ Role of Social factors in Health illness
1.5.23	SOCIALIATION	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Meaning & Nature of Socialization ➤ Types & Agencies of Socialization
1.5.24	SOCIAL GROUPS	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Concept of Social Groups ➤ Types of Social Groups ➤ Role of Groups in Hospital & Rehabilitation settings
1.5.25	FAMILY	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Meaning & Definition of family ➤ Functions & Types of family ➤ Influence of family on Individual's health
1.5.26	COMMUNITY	After the study of this topic the student shall be able to understand: <ul style="list-style-type: none"> ➤ Concept of Rural & Urban Communities ➤ Features of Rural & Urban Communities ➤ Health Hazards related to Rural & Urban Communities

1.5.27	CULTURE & HEALTH	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Meaning, Definition & Concepts of Culture ➤ Effects of culture on Behavior, Sickness & Health disorders
1.5.28	SOCIAL CHANGE	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Meaning & Factors affecting Social Groups ➤ Relations of Human adaptation on social changes
1.5.29	SOCIAL PROBLEMS OF DISABLED	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ To deal with the issues related to Poverty & Unemployment ➤ Beggary ➤ Alcoholism etc
1.5.30	SOCIAL SECURITY	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Social security & social legislation to the disabled
1.5.31	SOCIAL WORKER	<p>After the study of this topic the student shall be able to understand:</p> <ul style="list-style-type: none"> ➤ Meaning & role of Medical Social Worker