

1st year kinesiotherapy lesson plan (2025-2026)

Month	Week	Topic	Subtopic	Hours [D+C]
Jan	W1	Introduction	Definition, scope, aims	1
		Therapeutic gymnasium	Specification, identification of equipment, uses of accessories, principles Describe the uses of accessories such as Pulleys, Springs. Shoulder wheel, Walking aids, Suspension therapy equipment therapeutics in	5+4
Jan	W2	Therapeutic Gymnasium	Exercise therapy principles Uses of accessories	5
Jan	W3	Therapeutic Gymnasium	Suspension Therapy Principles	5+5
Jan	W4	Therapeutic Gymnasium	Suspension Therapy Principles Types, practical	5 +5
Feb	W1	Classification of movements	Types and physiological movements	5
Feb	W2	Classification of movements	Starting positions and derived positions	5+5
Feb	W3	Classification of movements	Classification of active and resisted movements	5+5
Feb	W4	Classification of movements	Practical	5+5
Mar	W1	Joint Mobility	Terminologies, indications and contraindications	5
Mar	W2	Joint Mobility	Principles	5
Mar	W3	Exam	Formative 1	-
Mar	W4	Joint Mobility	Techniques of individual joint mobility	5
Apr	W1	Joint Mobility	Practical	5+5
Apr	W2	Goniometry	Introduction, types	5
Apr	W3	Goniometry	Techniques of upper limb(demonstration)	5
Apr	W4	Goniometry	Techniques of upper limb(demonstration)	5
May	W1	Goniometry	Techniques of upper limb(demonstration)	5+5
May	W2	Practical	Techniques of upper limb(demonstration)	5
May	W3	Summer	-	-
May	W4	Summer	-	-
Jun	W1	Goniometry	Techniques of lower	5+5

			limb(demonstration)	
Jun	W2	Goniometry	Techniques of lower limb(demonstration)	5+5
Jun	W3	Exam	Formative 2	-
Jun	W4	Basic evaluation of vital parameters	Demonstrate assessment of vitals	2
Jul	W1	Basic evaluation of vital parameters	Demonstrate assessment of vitals	2
Jul	W2	Basic evaluation of vital parameters	Demonstrate assessment of vitals	5
Jul	W3	Exam	Midterm	-
Jul	W4	Basic evaluation of vital parameters	Demonstrate assessment of vitals	5
Aug	W1	Assessment of sensation reflexes and tones	Physiology and Demonstration of types of sensations, reflexes and tones	5+5
Aug	W2	Therapeutic soft tissue maneuvers	Define, classification, principles	4+4
Aug	W3	Therapeutic soft tissue maneuvers	Indications, contraindications, effects and uses, practical	4+4
Sep	W1	Relaxation	Principles, techniques, effects and uses	5+5
Sep	W2	Aerobic conditioning and basic principles of general fitness	Physiology, warm up and cool down exercises and their demonstration	5+5
Sep	W3	Exam	Formative 3	-
Oct	W1	Yoga	Principles, philosophy, physiological effects	5+5
Oct	W2	Yoga	Benefits, indications, contraindications	5+5
Nov	W1	Yoga	Demonstration of types of yogasanas	5
Nov	W2	Diwali	-	-
Nov	W3	Exam	Pre-final	-

1st Year Kinesiology & Movement Science Lesson Plan (2026-27)

Total Requirement: 130 Hours (Theory Focus) **Weekly Load:** ~5.5 Hours

Month	Week	Topic	Detailed Syllabus Subtopics	Theory (Hrs)
Feb	4	Introduction	Mechanics, Biomechanics & Kinesiology definitions; Importance in PT.	5
Mar	1	Kinematics I	Types of motion (Linear, Angular, Curvilinear); Planes and Axes.	5
	2	Kinematics II	Inter-relationship among kinematic variables; Motion analysis.	5
	3	Kinetics I	Force: Composition, Resolution, and Newton's Laws.	5
	4	Kinetics II	Friction: Definition, factors, and clinical effects in movement.	5
Apr	1	Kinetics III	Gravity: COG, LOG, Base of Support, and Stability.	5
	2	Kinetics IV	Equilibrium: Stable, Unstable, and Neutral states.	5

	3	Kinetics V	Levers: 1st, 2nd, and 3rd Class levers in the human body.	5
	4	Kinetics VI	Pulleys & Springs:	5

Month	Week	Topic	Detailed Syllabus Subtopics	Theory (Hrs)
			Anatomical pulleys; Spring properties.	
May	1	Therapeutic Gym I	Design and efficacy of Pulley systems and Weights.	5
	2-3	Summer Vac.	[BLANK - NO CLASSES]	-
	4	Therapeutic Gym II	Application of Slings, Springs (Series/Parallel), and Speed.	5
June	1	Starting Pos. I	Standing & Kneeling: Muscle work and Base of Support.	5
	2	Starting Pos. II	Sitting & Lying: Stability and therapeutic application.	5
	3	Starting Pos. III	Hanging: Mechanics and clinical indications.	5
	4	Derived Pos. I	Purpose of modification; Derived positions from Standing.	5
July	1	Derived Pos. II	Derived positions from Kneeling and Sitting.	5
	2	Derived Pos. III	Derived positions from Lying and Hanging.	5
	3-4	Midterms	[BLANK - EXAM TIME]	-

Aug	1	Muscle Work I	Isotonic (Concentric/Eccentric) and Isometric work.	5
	2	Muscle Work II	Isokinetic work; Torque; Work, Energy, and Power.	5
	3	Arthrokinematics	Concave-Convex	

Month	Week	Topic	Detailed Syllabus Subtopics	Theory (Hrs)
		I	Rule ; Spin, Roll, and Glide.	
	4	Arthrokinematics II	Open vs. Closed Kinetic Chain movements.	5
Sept	1	Shoulder Complex I	Anatomy recall; Scapulo-humeral rhythm.	5
	2	Shoulder Complex II	Force couples; Kinetics and Kinematics of the shoulder.	5
	3	Shoulder Complex III	Movement analysis of Abduction and Flexion.	5
	4	Hip Joint I	Anatomy recall; Angle of Inclination and Torsion.	5
Oct	1	Hip Joint II	Hip kinetics and kinematics; Force analysis.	5
	2	Hip Joint III	Two-joint muscle analysis (e.g., Rectus Femoris).	5
	3-4	Prefinals	[BLANK - EXAM TIME]	-
Nov	1	ADLs & Movement	Biomechanical analysis of Lifting, Pushing, and Pulling.	5

	2	Revision I	General Mechanics and Therapeutic Gymnasium review.	5
	3	Revision II	Starting/Derived Positions and Muscle Work review.	5
	4	Diwali Vac.	[BLANK - DIWALI HOLIDAYS]	-
Total				145 hrs

1st Year Electrotherapy-I Academic Plan (2026-2027)

Month	Week	Topic	Subtopics and Syllabus Requirements	Hrs (Theory +Practical)
Jan	1-2	Fundamentals of Physics	Physics principles, Laws of Electricity, and the Electromagnetic spectrum.	10+0
	3-4	Electrical Supply & Safety	Main supply, grounding, electric shock (causes, precautions, and prevention).	10+0
Feb	1-2	Current Production	Production of therapeutic electrical currents and machine panel diagrams.	10+0
	3-4	Electrical Components	Understanding capacitors, transistors, and valves in medical equipment.	10+0
Mar	1	Thermal Agents: Intro	Physical principles and physiological effects of superficial heat.	5
	2	Thermal Agents: Application	Therapeutic uses and precautions for various superficial thermal agents.	5
	3	Formative 1	Formative Assessment 1 (Basic Physics, Safety, and Thermal Agents).	-
	4	Cryotherapy	Principles, effects, and clinical application of cold	2+3

Month	Week	Topic	Subtopics & Syllabus Requirements	Hrs (Theory +practical)
Apr	1-2	Low Frequency: Basics	Introduction to types of therapeutic currents used in 1st year.	7+3
	3-4	Equipment Testing	Practical skills: Testing the working of various electrotherapeutic equipment.	2+8
May	1-2	Sound Waves & Ultrasound	Physics of sound waves; production of therapeutic ultrasound.	5+5
	3-4	Summer Vacation	Summer Holidays (Last 2 weeks of May).	-
June	1	Ultrasound: Effects	Physiological and therapeutic effects of Ultrasound.	5+0
	2	Ultrasound: Application	Techniques of application and safety measures.	0+5
	3	Formative 2	Formative Assessment 2 (Cryotherapy and Ultrasound).	-
	4	Actinotherapy: Intro	Introduction to electromagnetic field effects at the cellular level.	5+0
July	1-2	Cellular Effects & Risks	Risk factors of prolonged exposure to electromagnetic fields.	10+0
	3-4	Midterm	Midterm Examination (Full syllabus covered to date).	-
Aug	1-2	Superficial Heat: Practical	Demonstration and practice of Wax bath and hydrocollateral	0+10

			packs	
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Month	Week	Topic	Subtopics & Syllabus Requirements	Hrs (Theory + practical)
	3-4	Cryotherapy: Practical	Practical application of ice packs, towels, and immersion.	0+10
Sept	1	Biofeedback: Principles	Definition, principles, and mechanics of biofeedback in PT.	5+0
	2	Biofeedback: Mechanisms	Mechanism of biofeedback and modalities used as biofeedback.	5+0
	3	Formative 3	Formative Assessment 3 (Actinotherapy and Biofeedback).	-
	4	Laser Therapy (Intro)	Physical principles and properties of LASER.	5+0
Oct	1	Laser: Application	Types of LASER and testing the LASER machine.	3+2
	2	Modality Selection	Reasoning for selecting specific superficial agents vs. ultrasound.	5+0
	3-4	Prefinals	Prefinal Examination (Full Syllabus).	-
Nov	1	Final Practical Prep	Mock practical exams: Machine testing and application techniques.	0+5
	2	Diwali Vacation	Diwali Holidays (Starting ~Nov 6).	-

HUMAN ANATOMY

(Didactic –150hrs + Practical / Laboratory –60hrs)TOTAL-210 HRS

Sr.No.	Regions	Didactic Hours	Practical Hours	Total Hours
1	GENERAL ANATOMY AND HISTOLOGY	17	03	20
2	MUSCULOSKELETAL SYSTEM	57	33	90
3	NEURO ANATOMY	32	12	44
4	SYSTEMIC ANATOMY	09	03	12
5	CARDIO VASCULAR & RESPIRATORY ANATOMY	13	05	18
6	ABDOMEN	04	02	06
7	SENSORY ORGANS	04	02	06
8	ENDOCRINE & EXOCRINE SYSTEM	04	-	04
9	RADIOLOGY	10	-	10
TOTAL		150	60	210

Month &	Regions			
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week		Didactic Hours	Practical Hours	Total Hours
Dec Week 4&5	a. General Anatomy: i. Fascia ii. Muscles iii. Bones iv. Joints v. Nerve vi. Vessels	07	-	07
January Week 1	b. General Histology: i. Epithelial ii. Connective tissue iii. Muscle	04	01	05
January Week 2	iv. Bone and cartilage v. Nerve and vessels vi. Embryology	04	01	05
January Week 3	c. identification & describe anatomical aspects of muscles, bones, joints & attachment & analyse movements d. living anatomy e. discuss anatomical basis of various clinical conditions and RADIOLOGY	04	01	05
January Week 4	MUSCULOSKELETAL SYSTEM			
February Week 1	a. Superior extremity	05	-	05
February Week 2	. Superior extremity	03	02	05
February Week 3	. Superior extremity	03	02	05
February Week 4	Superior extremity	02	03	05
March Week 1	Superior extremity	02	03	05
March Week 2	b. Inferior extremity	05	-	05
March Week 3	. Inferior extremity	03	02	05
March Week 4	Inferior extremity &	03	02	05
April Week 1	Inferior extremity	02	03	05
April Week 2	Inferior extremity	02	03	05

April Week 3	c. Back & Thoracic Cage	05	-	05
April Week 4	Back & Thoracic Cage	03	02	05
May Week 1	Back & Thoracic Cage	02	03	05
May Week 2	d. Head Neck & Face Skull and Mandible Facial Muscles, blood supply, nerve supply	04	01	05
May Week 3 & May Week 4	SUMMER VACATIONS			
JUNE Week 1	MIDTERM EXAMINATION			
JUNE Week 2	Facial Muscles, blood supply, nerve supply Larynx & Pharynx	02	03	05
JUNE Week 3	Triangles of neck, Glands, Tongue & Palate Nose & Para nasal sinuses	04	01	05
JUNE Week 4	RADIOLOGY Muscles of mastication & T.M. joint, Extra ocular muscles with nerve supply	05	01	06
JULY Week 1	e. Living Anatomy: Upper extremity Lower extremity Head Neck & Face	03	02	05
JULY Week 2	Trunk NEURO ANATOMY	05	-	05

	a. General organization of Nervous System			
JULY Week 3	General organization of Nervous System b. Central Nervous System	01	04	05
JULY Week 4	Central Nervous System	04	01	05
AUGUST Week 1	Central Nervous System	04	01	05
AUGUST Week 2	Central Nervous System & Radiology	05	01	06
AUGUST Week 3	Central Nervous System	04	01	05
AUGUST Week 4	c. Cranial nerves	04	01	05
SEPTEMBER Week 1	Cranial nerves	04	01	05
SEPTEMBER Week 2	Cranial nerves RADIOLOGY	04	02	06
SEPTEMBER Week 3	RADIOLOGY d. Peripheral Nerves (should be done with respective parts) i. Autonomic Nervous System: ii. Sympathetic iii. Parasympathetic SYSTEMIC ANATOMY a. Alimentary system	06	-	06
SEPTEMBER Week 4	b. Urinary System c. Genital system: i. Male organs ii. Female organs (Pelvic cavity and Pelvic floor)	04	01	05
OCTOBER WEEK 1	. Female organs (Pelvic cavity and Pelvic floor) RADIOLOGY	04	02	06
OCTOBER WEEK 2	CARDIO VASCULAR & RESPIRATORY ANATOMY	04	01	05

	Thoracic wall, Lungs			
OCTOBER WEEK 3	Mediastinum, Heart and major blood vessels	04	01	05
OCTOBER WEEK 4	Heart and major blood vessels, Diaphragm & Intercostals	03	02	05
November week 1	DIWALI VACATION			
November week 2	f. Ribs and sternum ABDOMEN Muscles of abdomen	04	02	06
November week 3	Muscles of abdomen Muscles of pelvis SENSORY ORGAN- EAR,EYES	03	03	06
November week 4	Skin ENDOCRINE & EXOCRINE SYSTEM RADIOLOGY	06		06
DECEMBER WEEK 1	PREFINAL EXAMINATION			
DECEMBER WEEK 2	PREPARATORY LEAVE			

HUMAN PHYSIOLOGY

(Theory -150 hrs, Practical / Laboratory -50 hrs) **TOTAL 200 hrs**

Sr.No.	Topics	Didactic hrs	Practical hrs	Total hrs
1.	GENERAL PHYSIOLOGY	25	42	172
2.	NERVOUS SYSTEM	35		
3.	EXCRETORY SYSTEM	06		
4.	TEMPERATURE REGULATION	02		
5.	ENDOCRINE SYSTEM	06		
6.	REPRODUCTIVE SYSTEM	08		
7.	SPECIAL SENSES	05		
8.	RESPIRATORY SYSTEM	20		
9.	CARDIOVASCULAR SYSTEM	20		
10.	GASTROINTESTINAL SYSTEM	03		
11.	EXERCISE PHYSIOLOGY	015	08	023

12.	PHYSIOLOGY OF AGEING	005	-	005
Total		150	50	200

MONTHS AND WEEKS	Topics	DIDACTIC HOURS	PRACTICAL HOURS	TOTAL HOURS
DECEMBER WEEK 4&5	GENERAL PHYSIOLOGY a. Cell: i. Structure of cell membrane ii. Transport across cell membrane iii. Homeostasis b. Blood: i. Rh-ABOsystem & mismatch-transfusion	05	-	05
JANUARY WEEK 1	ii. WBC iii. Plasma protein iv. Platelets v. Hemoglobin vi. Normal values of blood(composition & function)	05	-	05
JANUARY WEEK 2	vii. Bleeding time & clotting time Haematology – (demonstration only)	01	04	05
JANUARY WEEK 3	Haematology –(demonstration only) GRAPHS: a. Skeletal muscle and its properties b. Cardiac muscle-properties-effect of Ach & Adrenaline	-	05	05
JANUARY WEEK 4	c. Nerve: i. Structure, classification & Properties ii. R.M.P& action potential iii.Propagationof nerve impulse	04	0	04
FEBRUARY WEEK 1	iv. Nerve injuries – degeneration, regeneration and reaction of degeneration	05	-	05

	d. Muscle: i. Structure-properties-classification-smooth, skeletal, cardiac, excitation/ contraction coupling			
FEBRUARY WEEK 2	ii. Factors affecting development of muscle tension, fatigue, load. iii. Neuro-muscular transmission; applied physiology: Myasthenia gravis, Eaton Lambert Syndrome.	05	-	05
FEBRUARY WEEK 3	NERVOUS SYSTEM: a. Introduction of nervous system, classification – C.N.S., P.N.S.& A.N.S. b. Synapse-structure, properties, & transmission;	05	-	05
FEBRUARY WEEK 4	c. Reflexes-classification & properties; d. Receptor physiology: classification, properties. e. Physiology of Touch, Pain, Temperature & Proprioception;	05	-	05
MARCH WEEK 1	f. Sensory and motor tracts: effect of transaction (complete and incomplete) at various levels g. Physiology of Muscle Tone (muscle spindle); Stretch reflex	05	-	05
MARCH WEEK 2	h. Connection & function of Basal ganglia, Thalamus, Hypothalamus, Sensory and Motor cortex, Cerebellum, Limbic system, Vestibular Apparatus	05	-	05
MARCH WEEK 3	i. Autonomic nervous system: Structure and functions of the sympathetic and the parasympathetic nervous system.	05	-	05
MARCH WEEK 4	j. Learning, memory & conditioned reflex	05	-	05
APRIL WEEK 1	k. Physiology of Voluntary movement	05	-	05

APRIL WEEK 2	<p>EXCRETORY SYSTEM:</p> <p>a. Kidneys-structure & function; b. Urine formation;(to exclude concentration and dilution) c. Juxtaglomerular apparatus d. Fluid and electrolyte balance –Na, K, H₂O e. Neural control of Micturation</p>	05	-	05
APRIL WEEK 3	<p>f. Applied physiology: Types of bladder</p> <p>Blood pressure-effects of change in posture & exercise</p>	02	04	06
APRIL WEEK 4	<p>TEMPERATURE REGULATION</p> <p>ENDOCRINE SYSTEM:</p> <p>a. Secretion-regulation & function of Pituitary-Thyroid-Adrenal-Parathyroid-Pancreas</p>	05	-	05
MAY WEEK 1	<p>b. Applied physiology (abnormalities) of the above mentioned glands</p> <p>REPRODUCTIVE SYSTEM:</p> <p>a. Physiology of ovary and testis b. Physiology of menstrual cycle and spermatogenesis</p>	05	-	05
MAY WEEK 2	<p>c. Functions of progesterone, estrogen and testosterone d. Puberty & menopause e. Physiological changes during pregnancy</p>	05	-	05
MAY WEEK 3 & 4	SUMMER VACATION			
JUNE WEEK 1	MIDTERM EXAMINATION			
JUNE WEEK 2	<p>e. Physiological changes during pregnancy</p> <p>SPECIAL SENSES:</p>	05	-	05

	<p>a. Structure and function of the eye</p> <p>b. Applied physiology: errors of refraction, accommodation, reflexes – dark and light adaptation, photosensitivity.</p> <p>c. Structure and function of the ear</p>			
JUNE WEEK 3	<p>d. Applied physiology-types of deafness</p> <p>RESPIRATORY SYSTEM:</p> <p>a. Introduction, structure and function of the RS</p> <p>b. Mechanics of respiration;</p>	06	-	06
JUNE WEEK 4	<p>c. Pulmonary Volumes & capacities;</p> <p>d. Anatomical & Physiological Dead space-ventilation/perfusion ratio, alveolar ventilation</p> <p>e. Transport of respiratory gases</p>	05	-	05
JULY WEEK 1	<p>f. Nervous & Chemical control of respiration</p> <p>g. Pulmonary function tests-Direct & indirect method of measurement</p>	05	-	05
JULY WEEK 2	<p>g. Pulmonary function tests-Direct & indirect method of measurement</p> <p>h. Physiological changes with altitude & acclimatization</p> <p>Blood pressure-effects of change in posture & exercise</p>	04	-	04
JULY WEEK 3	<p>Blood pressure-effects of change in posture & exercise</p> <p>Examination of pulse</p>	-	05	05
JULY WEEK 4	<p>CARDIOVASCULAR SYSTEM:</p> <p>a. Structure & properties of cardiac muscle</p>	05	-	05

	b. Cardiac impulse-initiation and conduction			
AUGUST WEEK 1	c. Cardiac cycle d. Heart rate regulation	05	-	05
AUGUST WEEK 2	. Heart rate regulation e. Blood pressure-definition-regulation-Cardiac output-regulation & function affecting; Peripheral resistance, venous return f. Regional circulation-coronary-muscular, cerebral	05	-	05
AUGUST WEEK 3	f. Regional circulation-coronary-muscular, cerebral Normal ECG.	05	-	05
AUGUST WEEK 4	Spirometry a. Lung volumes and capacities b. Timed vital capacity Perimetry	-	05	05
SEPTEMBER WEEK 1	GASTRO INTESTINAL SYSTEM: a. Absorption and digestion in brief b. Liver function EXERCISE PHYSIOLOGY a. Basal Metabolic Rate and Respiratory Quotient b. Energy metabolism	05	-	05
SEPTEMBER WEEK 2	c. Fatigue d. Oxygen debt e. Acute cardio vascular changes during exercise, difference between mild, moderate and severe exercise, concept of endurance	05	-	05

	f. Acute respiratory changes during exercise g. Concept of training/conditioning, effects of chronic exercise/effect of training on the cardiovascular & respiratory system			
SEPTEMBER WEEK 3	h. Body temperature regulation during exercise i. Hormonal and metabolic effects during exercise j. Effects of exercise on muscle strength,power,endurance	05	-	05
SEPTEMBER WEEK 4	j. Effects of exercise on muscle strength,power,endurance k. Physical fitness and its components Physical fitness: a. Breath holding	03	02	05
OCTOBER WEEK 1	b. Mercury column test; c. Cardiac efficiency test- Harvard step test-Master step test		05	05
OCTOBER WEEK 2	PHYSIOLOGY OF AGEING (With respect to all systems)	05	-	05
OCTOBER WEEK 3	Clinical examination: History taking and general examination	-	05	05
OCTOBER WEEK 4	system / cardio vascular system / Higher functions	-	05	05
NOVEMBER WEEK 1	DIWALI VACATION			
NOVEMBER WEEK 2	Cranial nerves /Reflexes	-	05	05
NOVEMBER WEEK 3	/Cranial nerves /Reflexes / Motor & Sensorysystem	-	05	05
NOVEMBER WEEK 4	CLASS PRACTICE			
DECEMBER WEEK 1	PREFINAL EXAMINATION			
DECEMBER WEEK 2 ONWARDS	PREPARATORY LEAVE			

BIOCHEMISTRY

(Didactic 46hrs+Demonstrations 4hrs) **TOTAL50 HRS**

Sr.No.	Topics	Didactic Hours	Demonstrations Hours	Total Hours
1	CARBOHYDRATES	9		9
2	PROTEINS	6		6
3	ENZYMES	4		4
4	VITAMINS	4		4
5	MINERALS	5		5
6	HORMONES	1		1
7	NUTRITION	3		3
8	CLINICAL BIOCHEMISTRY	6	4	10
9	LIPID	4		4
10	MUSCLE CONTRACTION	4		4
TOTAL		46	4	50

MONTHS AND WEEKS	Topics	DIDACTIC HOURS	PRACTICAL HOURS	TOTAL HOURS
JANUARY WEEK 1	<p>CARBOHYDRATES</p> <p>a. Chemistry, Definition, Classification with examples, Functions</p> <p>b. Digestion and Absorption, Glycogenesis, Gluconeogenesis, Glycogenolysis and HMP pathway, Glycolysis, Electron transport chain for ATP synthesis, TCA cycle. Hormonal regulation of blood</p>	04	-	04
JANUARY WEEK 2	c. Glucose, Glycogen storage disorders, Diabetes mellitus, Glycosuria, changes in Carbohydrate, Protein & Lipid metabolism.	02		02
JANUARY WEEK 3	d. All the metabolisms should be taught based on the following points such as starting and ending products, tissues of occurrence and the conditions when the pathway is activated, deactivated and significance of the pathway.	03		03
JANUARY WEEK 4	<p>PROTEINS</p> <p>a. Definition, Importance, Functional Classification, Digestion & Absorption, decarboxylation, deamination, transamination, transmethylolation, Urea cycle, clinical significance of serum urea, function of glycine, Phenylalanine, tryptophan, methionine tyrosine.</p>	03	-	03

FEBRUARY WEEK 1	b. There should be an emphasis on understanding the structure of protein, the essential and non-essential amino acids.	03	-	03
FEBRUARY WEEK 2	ENZYMES Definition, Modern Classification, Factors affecting enzymes Action, diagnostic & therapeutics uses & enzymes, Isoenzymes, Competitive & Non competitive inhibition.	04	-	04
FEBRUARY WEEK 3	VITAMINS Definition, Classification, Fat & water soluble vitamins, functions, Deficiency manifestations sources & RDA	04	-	04
FEBRUARY WEEK 4	MINERALS Ca, P, Fe, I, Zinc, Selenium, Fluorine, Magnesium include Na and K. Function sources, Deficiency manifestations	04	-	04
MARCH WEEK 1	Deficiency manifestations HORMONES Definition with mechanism of action, classification.	02	-	02
MARCH WEEK 2	NUTRITION Composition of food, balanced diet, Kwashiorkor, Marasmus, Nitrogen balance, major Dietary constituent & their importance. Include energy requirements, factors affecting B.M.R., S.D.A. (Specific Dynamic Action) and R.Q. (Respiratory Quotient)	03	-	03

MARCH WEEK 3	CLINICAL BIOCHEMISTRY a. Liver Function Test, Renal Function Test, Lipid profile in serum b. Starvation metabolism, Hemoglobin chemistry and metabolism	03	-	03
MARCH WEEK 4	c. Demonstrations: Demonstration of estimation of various biomolecules and their interpretation Interpret reports of various conditions (including Diabetic profile, Cardiac profile, Uric acid and Gout)	03	-	03
APRIL WEEK 1	CLINICAL BIOCHEMISTRY a. Liver Function Test, Renal Function Test, Lipid profile in serum b. Starvation metabolism, Hemoglobin chemistry and metabolism	-	02	02
APRIL WEEK 2	c. Demonstrations: Demonstration of estimation of various biomolecules and their interpretation Interpret reports of various conditions (including Diabetic profile, Cardiac profile, Uric acid and Gout)	-	02	02
APRIL WEEK 3	REVISION			
APRIL WEEK 4				
MAY WEEK 1				
MAY WEEK 2				
MAY WEEK 3 & 4	SUMMER VACATION			
JUNE WEEK 1	MIDTERM EXAMINATION			

JUNE WEEK 2	<p>LIPID Definition, classification with examples biomedical importance, Phospholipids & lipoproteins functions. Digestion & absorption of lipid, βoxidation of fatty acid with Energetics, Ketone bodies and their metabolism, Prostaglandins and essential fatty acids, Cholesterol, importance of cholesterol, obesity</p>	04	-	04
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JUNE WEEK 3	CLASS TEST			
JUNE WEEK 4				
JULY WEEK 1	MUSCLE CONTRACTION Mechanism & Biochemical events Connective Tissue- Biochemistry of connective tissue Collagen-Glyco-protein proteoglycans	04	-	04
JULY WEEK 2	REVISION			
JULY WEEK 3				
JULY WEEK 4				
AUGUST WEEK 1				
AUGUST WEEK 2				
AUGUST WEEK 3	REVISION			
AUGUST WEEK 4				
SEPTEMBER WEEK 1				
SEPTEMBER WEEK 2				
SEPTEMBER WEEK 3	CLASS TEST			
SEPTEMBER WEEK 4				
OCTOBER WEEK 1				
OCTOBER WEEK 2				
OCTOBER WEEK 3				
OCTOBER WEEK 4				
NOVEMBER WEEK 1	DIWALI VACATION			
NOVEMBER WEEK 2	PREFINAL EXAMINATION			