KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH
(Formerly known as KLE University)
(Deemed-to-be-University established u/s 3 of the UGC Act, 1956)
Accredited 'A' Grade by NAAC (2nd Cycle) Placed in Category 'A' by MHRD (GoI)
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Pre and Post Syllabus Revision

BoS Meeting	Name Of The Courses	Subject	Pre Revision	Post Revision	Percentage	Resolution/ Link To Relevant Document
2021	Ist BDS	Anatomy	Not included earlier	**Topics for Integrated teaching** are identified. a. Gen. Human Anatomy: b. Muscle tissue, c. thyroid gland & d. liver (Gross & Histology)	20%	
2021	Ist BDS	Physiology	Not included earlier	**Topics for Integrated teaching** are identified. Physiology: Salivary Glands Inclusion of 'Calcium Homeostasis' in endocrine system as it is relevant to dental students		
2021	Ist BDS	Biochemistry	Not included earlier	**Topics for Integrated teaching** are identified.		

				Biochemistry: 1. Muscle tissue, 2. thyroid gland, 3. Liver 4. Calcium homeostasis Inclusion of topics: Sugar derivatives, Introduction to anti-vitamins and hypervitaminosis, Introduction to allosteric regulation, Significance of HMP shunt pathway, Synthesis of palmitic acid, fatty liver, and lipotropic action.		
2021	II BDS	Pharmacology	Not included earlier	To introduce Computer assisted learning (**CAL**) to study the effect of drugs in subject of Pharmacology Assessment of general pharmacy dispensing practicals in summative exam of Pharmacology to be replaced by assessing students's knowledge regarding common dosage formulations as general pharmacy dispensing drugs are obsolete in clinical practice. Inclusion of fixed dose combination (**FDC**) in		

				Pharmacology practicals to improve clinical skills on rationale of drug combinations of marketed drugs. Inclusion of FDC in Pharmacology practicals to appreciate adverse reactions & drug interactions of commonly used drugs.		
2021 2021	II BDS IIBDS	Pathology Dental	Not included earlier Were earlier included	To change existing type of disciplined method of teaching bleeding time (BT) estimation, clotting time(CT) estimation, ESR, PCV & blood indices in pathology practical's to interpretation with the help of charts so as to avoid repetition since these topics are covered in Physiology practical in I yr BDS To exclude 'Amyloidosis' chapter from theory & practical as the cases of amyloidosis are very rare now a days.		

2021	IIBDS	Materials Microbiology	Not included earlier Were earlier included	To exclude hemopoiesis, Hb estimation & total blood count from practical so as to avoid repetition since these topics are covered in physiology practical in I BDS Introduction of self-assessment method in Dental Materials practicals where students can self-evaluate their practical skills with the help of check-lists available in log books. To exclude following topics from II BDS syllabus as they are not recommended by DCI & are not relevant to dental students. Removal of following topics will reduce syllabus burden.		

				-Systemic Bacteriology: Coliforms, Salmonella, Shigella, Vibrio & Pseudomonas. -Virology: Adenovirus, Rabies & Polio virus. -Mycology: Rhinosporidios -Parasitology: Endamoeba, Leishmania& Helminthic parasites. Applied Microbiology: Animal experiments as they are obsolete & are not recommended by DCI The topic of SARS will be included in Virology section in the subject of Microbiology.		
Feb 2021	BDS MDS MDS	Oral Medicine and Radiology Oral Medicine and Radiology Conservative Dentistry and Endodontic	Not included earlier Not included earlier Not included earlier	Wants to introduce **"Lasers in Dentistry"** for UG's as a part of theory only (1 hour) and as a part of theory and practical for PG's. Wants to introduce **"Lasers in Dentistry"** as a part of theory and practical for PG's. Wants to incorporate "**Micro-dentistry"** and "**Lasers in Dentistry"** for PG's as a part of Pre-clinical practical		

	BDS	s Oral maxillofacial surgery	Were earlier included	Will integrate with **General surgery** for the topic "Development of face".		
			Not included earlier	All the departments have submitted the following blended learning topics which were previously taken in the form of didactic lectures. **List attached below**		
15th September 2021	**BAMS-UG** (Due for revision)	Swasthavritta	As regulated by council norms	Part B section of paper I is replaced with Part B of paper II Part B section of paper II is replaced with Part B of paper I	50%	(Recommended as per the regulating council norms) As per the Govt of India Gazette (Ref letter No. 397 dated 7-11-2016)
2021-2022	**B. Pharm 3rd Semester**	**Pharmaceutical Organic Chemistry -II (Theory) (BP301T)**	**UNIT III** **Fats and Oils** a. Fatty acids – reactions. b. Hydrolysis, Hydrogenation, Saponification & Rancidity of oils, Drying of oils. c. Analytical constants – Acid value, Saponification value, Ester value, Iodine value, Acetyl value, Reichert Meissl (RM)	(**Additional Specification**) Pharmaceutical Applications of Oils and Fats **Basis for change**: Oils and fats are the important components used in pharmaceutical formulations. They are incorporated as either active chemical agents or as excipients in preparations. ▪ As the current syllabus mentioned in Unit-III (Oils and Fats) is dealing with fatty acid		

			value – significance & principle involved in their determination.	reactions and analytical constants.		
		Microbiology (Theory) (BP303T)	**Unit II** Identification of **bacteria** using staining techniques (simple, Gram's & Acid-fast staining) and biochemical tests (IMViC).	(**Specification**) ▪ Identification of ***microbes*** using morphological, biochemical, and molecular biology methods. (Microbial identification is a broader term to be used instead of bacteria to include fungi, yeast & Streptomyetes) **Basis for change**: Presently only identification of bacteria using staining & biochemical methods. Microbes are a significant threat to sterility, being able to accurately identify microbes is often a GMP requirement within the pharmaceutical industry. Molecular methods of identification are rapid, accurate & more common for identification of sources of contamination, biotechnologically & industrially important microbes		
			Unit III Study of morphology, classification, reproduction/ replication & cultivation of Fungi and	Subtopic to be shifted to Chapter I **Basis for change** : Unit III. Deals with related topics of disinfectants, antiseptics, bacteriostatic & bactericidal sterility		

			Viruses.	testing, etc. The given subtopic is a mismatch to the given chapter content		
			Unit V Growth of animal cells in culture – general procedure for cell culture, primary, established & transformed cell culture	Growth of animal cells in culture – general procedure for ***Animal*** cell culture, primary, established & transformed ***Animal*** cell culture Term '***Animal***' included avoiding confusion with plant cell culture		
		Pharmaceutical Engineering (Practical) (BP 308P)		**(Exclusion)** ***Pr.no XII: To study the effect of time on the rate of crystallization*** **Basis for change:** The theory does not include the chapter on Crystallization		
				(Addition) ***To determine the efficiency of liquid-liquid mixing using a propellor*** The theory includes a chapter on mixing		
	B. Pharm 4th Semester	**Physical Pharmaceutics (Theory) (BP403T)**	**Unit I** ***Colloidal Dispersion***	**(Addition)** Purification and Stability of colloids **Basis for change**: Student needs to understand the stability aspects of colloids to DLVO theory		
			Unit III ***Coarse Dispersion***	• Physical stability of the suspension • Sedimentation volume Degree of flocculation Basis for change The		

				student needs to understand the stability aspects of suspension to Sedimentation volume & Degree of flocculation.		
		Pharmacognosy and Phytochemistry I (Theory) (BP405T)	**Unit V** Novel Medicinal agents from Marine sources	**(Specifications defined)** Antimicrobials: *Disidea avara* (Sponge), *Dictyopteris zonoroid* (Brown Algae), anticancer *Bulgula eritina* (Brown Bryozoan); cardiovascular: *Octopus vulgaris* (*Octopus*); Marine toxins *Helix pomatia* (Burgundy Snail) **Basis for change***:* It provides additional information about crude drugs		
		Physical Pharmaceutics (Practical) (BP407P)	**Practical**	**Repetition - Exclusion**) Pr no I: ***Determination of Particle size, particle size distribution using sieving method*** **Basis for change *:*** Practical is performed in 3rd sem Pharmaceutical engineering		
				(Addition) ***Determination of type and stability of Emulsion*** **Basis for change *:*** Replacement for above practical		
		Pharmacognosy and Phytoche		**(Reorganization - To shift from 5th Sem to 4th Sem**)		

		mistry I (Practical) (BP408P)		• Morphology, histology & powder microscopy of Cinchona, cinnamon, senna, clove, ephedra, fennel & coriander • **(Addition)** Analysis of crude drugs by chemical tests: 1. Asafetida, 2. Benzoin, 3. Colophony, 4. Aloes, 5. Myrrh. **(Modification)** Quantitative Microscopy (unit 2, 3 & 6) to be shifted from 4th Sem to 5th Sem **Basis for change** : Students need to know basic information regarding morphological & microscopical characters of crude drugs before being exposed to quantitative microscopy. • To balance the practical workload for the 5th sem 4th Sem is focused on basic pharmacognosy techniques, hence, advanced experiments shifted to 5th Sem		
	B. Pharm 5th Semester	**Medicinal Chemistry -II (Theory) (BP 501T)**	**UNIT- I** **Antihistaminic agents: Histamine, receptors & their distribution in human body** **H1–antagonists: Diphenhydramine hydrochloride*, Dimenhydrinate**	**(Specifications defined)** General SAR of H1 and H2 Antagonist **Basis for change**: As the current syllabus mentioned in the unit is dealing with definitions and classifications and study of drugs and hence to understand the structure and its relation with biological activity there must General SAR		

			, Doxylamines cuccinate, Clemastine fumarate, Diphenylphyraline hydrochloride, Tripelenamine hydrochloride, Chlorcyclizine hydrochloride, Meclizine hydrochloride, Buclizine hydrochloride, Chlorpheniramine maleate, Triprolidine hydrochloride*, Phenidamine tartarate, Promethazine hydrochloride*, Trimeprazine tartrate, Cyproheptadine hydrochloride, Azatidine maleate, Astemizole, Loratadine, Cetirizine, Levocetrazine Cromolyn sodium **H2-antagonists: Cimetidine*, Famotidine, Ranitidin.**	must be included in this unit.		
		Industrial Pharmacy -I (Theory) (BP 502T)	**Unit II** ***Tablets***	(**Addition**) Quality control tests of Tablets as per Pharmacopeial standards **Basis for change** : Student needs to understand the evaluation parameters		

				and official standards		
				(Addition) • Preparation of Shampoo in cosmetics • Quality control tests for Tablets as per Pharmacopeial standards		
		Pharmaceutical Jurisprudence (Theory) (BP 505T)	**Unit –III 10 Hrs** 1. Pharmacy act-1948 2. Medicinal and toilet preparation act 1955 3. Narcotic drugs & psychotropic substances act 1985 and Rules Unit –IV 7 Hrs 4. Pharmaceutical Legislation 5. Code of pharmaceutical ethics 6. Medical termination of pregnancy act 7. Right to information act Introduction to intellectual property rights	**Reorganization/grouping of subtopic**) • **Unit –III 7 Hrs** 1. Pharmacy Act-1948 2. Pharmaceutical legislation 3. Code of pharmaceutical ethics • **Unit –IV 10 Hrs** 1. Medicinal & toilet preparation act 1955 2. Narcotic drugs & psychotropic substances act 1985 & Rules 3. Medical termination of pregnancy act 4. Right to information act Introduction to intellectual property rights **Basis for change** : • Relevant topics should be included in the concerned unit, accordingly, the number of hours must be adjusted as specified		
		Pharmacognosy and Phytochemistry I	**Practical**	• (**Reorganization - To be shifted from 5th Sem practical to 4th Sem**) Morphology,		

		(Practical) (BP508P)		histology & powder microscopy of Cinchona, cinnamon, senna, clove, ephedra, fennel & coriander • **(Reorganization – shifted to 4th sem)** Analysis of crude drugs by chemical tests: 1. Asafetida, 2. Benzoin, 3. Colophony, 4. Aloes, 5. Myrrh. **(Addition)** Quantitative Microscopy (unit 2, 3 & 6) to be shifted from 4th Sem to 5th semester **Basis for change :** • Students need to know the basic information regarding morphological & microscopical characters of crude drugs before being exposed to quantitative microscopy. • To balance the practical workload for the 5th sem 4th Sem is focused on basic pharmacognosy techniques, hence, advanced experiments shifted to 5th Sem		
	B. Pharm 6th Semester	**MEDICINAL CHEMISTRY -III (Theory) (BP601T)**	**UNIT-V:** **Introduction to Drug Design, Various approaches used in drug design.** **Physicochemical parameters used in the quantitative structure-activity relationship (QSAR) such as**	**Addition**) Concept and Applications of Computer-Aided Drug Design (CADD) Basis for change: Required as the practical syllabus of this subject is dealing with two practicals which are completely based on computer applications.		

			partition coefficient, Hammet's electronic parameter, Taft's steric parameter, and Hansch analysis. **Pharmacophore modeling & docking techniques**			
		Pharmacology -III (Theory) (BP602T)	**Unit-V** **Principal of Toxicology** **Regulatory bodies-OECD there functions and ICH Guidelines**	• Regulatory bodies- OECD there functions and ICH Guidelines **Basis for change:** To know the various regulatory bodies for toxicological studies		
		Pharmaceutical Biotechnology (BP605T)	**Unit I** **f) Basic principles of genetic engineering**	**Reorganization/grouping of subtopic** Subtopic to be shifted or included in Unit 2 • Basis for Change : Relevance. Subtopic f is more relevant to Unit II. • Unit I deals with general biotechnology, and enzyme biotechnology & biosensors. Unit II deals with relevant recombinant DNA technology and other aspects of modern biotechnology		
			Unit III ***g)*** **Blood products & Plasma Substitutes.**	**(Reorganization/grouping of subtopic)** Subtopic to be shifted unit V **Basis for change :**		

				Relevance & continuation of subtopic ***d*** in Chapter V, which deals with blood products. **Unit V: d) Blood Products: Collection, Processing, and Storage of whole human blood, dried human plasma, plasma Substitutes**		
			Unit IV **a) Immunoblotting techniques- ELISA, Western blotting, Southern blotting**	**Reorganization/grouping of subtopic)** • Subtopic to be shifted to Unit III • **Basis for change:** Unit III deals with Immunology and therefore it is very appropriate to include immunoblotting techniques in Unit III. Unit IV deals with bacterial genetics, the subtopic of immunoblotting techniques does not fit the theme of the chapter.		
		Pharmaceutical Quality Assurance (BP606T)	**Unit IV**	**(Addition**) Data Integrity and its importance **Basis for change** : As unit IV consists of a documentation & quality management system it's important to highlight data integrity-related issues and ways to reduce them		
	B. Pharm 7th Semester	**Industrial Pharmacy -II (Theory) (BP 702 T)**	**Unit 1: SUPAC guidelines for immediate release (IR), Modified**	SUPAC guidelines for IR, MR, and Non-sterile semisolid dosage forms **Basis for change** : • SUPAC guidelines are		

			release (MR), and Non-sterile semisolid dosage forms	there for IR, MR, and Non-sterile semisolid dosage forms. For better understanding & clarity of the students, it should be mentioned in the syllabus.		
			Unit 2	**(Error Rectification)** • **Change APCTD to APCTT** **Basis for change :** • APCTT stands for Asia and Pacific Centre for Technology Transfer. There is no such Tech transfer agency by the name APCTD in India.		
		Novel Drug Delivery System (Theory) (BP 704T)	**Unit III** **Transdermal Drug Delivery Systems**	**Addition** Evaluation of transdermal delivery systems in topic **Basis for change** : The student should know few bsasic evaluation parameters for TDDS		
			Unit V **Ocular Drug Delivery Systems**	(**Addition-** specification) Classification of ocular Drug delivery systems **Basis for change**: Student needs to know the types of ocular formulation		
		Instrumental Methods of Analysis (Practical) (BP 705P)	**Practical**	(**Addition**) Interpretation of organic compounds using FTIR (Aromatic and aliphatic alcohols, Carboxylic acid, Amide, aldehydes, and ketones)		

				Basis for change : Hands-on training & visual verification of compound synthesized will boost interest & morale of students in the subject. The interpretation of IR and visualizing the chemical group peaks will catch the attention of students giving them a feeling of accomplishment		
				Additional Specification) Minimum of 15 experiments to be conducted **Basis for change** : For uniformity across constituent units		
	B. Pharm 8th Semester	**Cosmetic Science (Theory) (BP809ET)**	**Unit V**	**Removal of Antiperspirants ad Deodorants – Actives and mechanism of action** from Unit **V** **Basis for change:** Repeated two times in the syllabus		
			Unit V	**Addition**) • Principles of Formulation for Skin products to treat blemishes, wrinkles & acne, Principles of Formulation for Lip products, Nail products **Basis for change** : Unit **V** is all about causes & problems associated with skin & hair, however, emphasis		

				has to be given on formulation aspects for products related to these problems		
		Advanced Instrumentation Techniques (Theory) (BP811ET)	**Additional References**	(**Addition**) • Standard Operating Procedure Manual: Calibration of glassware & equipment's for quality control, by Bhuvnesh Kumar Singh, Neelanchal Trivedi, LAP LAMBERT Academic Publishing ISBN-10: 3659965464		
		Pharmaceutical Product Development (Theory) (BP814ET)	**Unit IV** **Optimization techniques in Pharmaceutical Product Development**	(**Addition**) • Defining Optimization parameters and classifying them. • ***Problem Type*** i. Constrained ii. Unconstrained • ***Variables*** i. Dependent Independent **Basis for change** : Addition of optimization parameters with their classification and examples is an important parameter that must be considered in product development.		
			Unit V **Selection & QC of packaging materials**	(**Addition**) ICH Guidelines for stability testing of - containers and closures. Basis for change: Containers & closures play a very vital role in determining the shelf life and stability of a product.		

2020-2021	**1st Year M.P.T.** **PAPER-I**	Physiotherapy Education, Research, Biostatics & Ethics	18th topic- Role of computer 19th topic- Protocol writing , Manuscript writing	**18th topic changed to Technology in Research** **19th topic - Grant writing is** **In Ethics** Removed ICF Chapter Removed influence of Values & valuing patient care		
	PAPER II	Basic Sciences And Physiotherapeutic	**Basic Science :** **VI** Motor development concept, Motor control & its training techniques **VII** Recovery of function & neural plasticity electrical excitability of muscle & nerve & composition peripheral nerves, Muscle plasticity in response to electrical stimulation, neural control of locomotion	**Basic Science:** **Removed** • Motor control & its training techniques • **VII** only kept as **neural control of locomotion** **Added New Chapter** • Embryology, development of body system & their functions • ICF, ICIDH-Definition, Principles, Coding & Applications • Assessment and clinical examination of musculoskeletal system, Cardiorespiratory system & Nervous system in pediatric, adult and geriatric population **PHYSIO**		

			PHYSIO THERAPEUTICS **4th Chapter Assessment & clinical examination**	**THERAPEUTICS** • **4th Chapter Removed** Assessment & clinical examination • **Added** • Motor control • Aids and Appliances • IBR and CBR • Principles of pathological investigations and imaging techniques related to neuromuscular, skeletal & Cardiopulmonary system with interpretations		
	Paper-III	Clinical, Physical and Functional diagnosis in Cardio-Vascular And Pulmonary Physiotherapy	• Outcome measures used in Cardio-vascular and pulmonary Physiotherapy	**Removed** • Outcome measures used in Cardio-vascular and pulmonary Physiotherapy **Added** • Application of ICF in Cardio –vascular and pulmonary Physiotherapy		
	Paper-IV	Cardiovascular and Pulmonary Physiotherapy		**Added:** • Covid-19 in Pulmonary disorders and Physiotherapy management including exercise prescription • Management of pediatric and geriatric cardiac and pulmonary disorders • Burn Rehabilitation in critical care unit		

				• Role of tele rehabilitation in cardiac and pulmonary disorders • Clinical decision making in cardiovascular and pulmonary Physiotherapy		
	Paper-V	Recent advances and Evidence Based Practice in Cardiovascular and Pulmonary Physiotherapy		**Added:** • Use of advance Assistive devices like Robot therapy, continuous lateral rotation therapy, intrapulmonary percussive ventilator and technologies in cardiovascular and pulmonary system • Evidence based practice and recent advances of Aquatic therapy in cardiovascular conditions like diabetes, PVD, hypertension etc.		
	Paper-III	Clinical, Physical and Functional diagnosis in Community Physiotherapy and Rehabilitation	**Chapter 8**- Developmental disorders, screening and diagnosis **Chapter 9**- Hand function assessment & Diagnosis **Chapter 10**- Voluntary control assessment electro diagnosis, clinical & kinesiological EMG and evoked	**Removed** 8,9,10, 13,14 & 15 Chapter **Added:** • Persons with disabilities act (PWD) 1995 with its latest amendments • Lifestyle disorders – identification & management in the community • Disability models, Disability screening, its various methods & prevention with levels of prevention		

			potential studies **Chapter 13-** Physical Disability evaluation methods & disability diagnosis **Chapter 14-** Equipment's in community Physiotherapy **Chapter 15-** Community survey	• Health indicators, National health Programs & Family welfare programs • District Rehabilitation center & District level rehabilitation • CBR Matrix & Indicators • ICF, ICIDH • Modes of delivery of Rehabilitation (IBR & CBR) • Legal & Ethical issues related community Physiotherapy • Rural services, extension services & mobile units • Tele-Rehabilitation- Need, Methods and standards, Challenges		
	Paper-IV	Community Physiotherapy and Rehabilitation	**Chapter2-** Physiotherapy management for Ergonomics & industrial issues **Chapter 3-** Physiotherapy management for neurological & pediatric condition at community level **Chapter 4-** Physiotherapy management for orthopedic and medical conditions at community level **Chapter 5-** Physiotherapy	**Removed** • Chapter 2,3,4,5,6,9,12,13,14. 15 & 16 **Added:** • Industrial Therapy • Occupational Health & Ergonomics • Role of community Physiotherapy in Women's Health, geriatric health., Geriatric health, Mental health, Amputee rehabilitation, adult rehabilitation of pediatric conditions • Access Audit		

			management for OBG, surgical and geriatric at community level **Chapter 6 -** Physiotherapy management of cardiac & pulmonary condition at community level **Chapter 9** – Persons with disabilities, their health & expectations from health system **Chapter 12-** Extension services & Mobile units **Chapter 13-** National district level rehabilitation program **Chapter 14-** concept of impairment, disability, handicap (ICIDH) and early intervention and awareness program in CBR **Chapter 15-** Rehabilitation approaches at community level National rehabilitation policies & benefits extended	• Assistive technology • WHODAS & Disability evaluation • Vocational rehabilitation • Wheelchair Prescription • NGOs, Governmental organizations (National & International), self-help groups • Health education & Community awareness programs • Inclusive education program & adult education program		

			to disabled **Chapter 16-** Mobility aids and appliances, adaptive functional devices to improve overall dysfunction, Architectural barriers, ADL training			
	Paper-V	Recent Advances and Evidence Based Practice in Community Physiotherapy and rehabilitation	**Chapter 9-** Ethical consideration, Recent advances and controversies in community Physiotherapy	**Removed:** Chapter 9		
	Paper-III	Clinical, Physical and Functional diagnosis in Geriatric Physiotherapy	Review of theories of aging, concepts of aging, physiology & exercise physiology	**Changed to** Applied anatomy, physiology, exercise physiology and biomechanics related to aging /degenerative changes in various systems of human body, review of theories of aging, concept of aging		
	Paper-IV	Geriatric Physiotherapy		**Added** • Psychosomatic approaches for management in disorders of stress and change in lifestyle to reduce risk factors for		

				disability and mental imagining techniques to improve motor performance • Geriatric Syndromes		
	Paper-V	Recent advances and Evidence Based Practice in Geriatric Physiotherapy		**Added:** • Telemedicine in Geriatrics		
	Paper-III	Clinical, Physical and Functional diagnosis in Neuro-Physiotherapy	**Chapter 7**- Principles of pathological investigations and imaging techniques related to neurology disorders with interpretation **Chapter 11**- Hand function assessment, diagnosis and management **Chapter 14** - Electrotherapeutic stimulation systems, Electrophysiological assessment devices & NMES – Instrumentation, Characteristics & components **Chapter 15**- Electrodiagnosis, clinical & kinesiological	**Removed** Chapter 7,11,14,15,16,20 & 21 **Added:** • Electrophysiological assessment devices • Biomarkers specific to neurological disorders • Assessment of Emotional Intelligence • Assessment of Peripheral nerve injuries and Cranial nerve disorders • Neurophysiology and evaluation of Balance and coordination • Assessment of Physical ands Neurological Functions of patients in ICU		

			electromyography and evoked potential studies (EMG, NCV, RNS, EP, EEG, ECG), Conventional methods **Chapter 16-** EMG with reference to pathophysiology & Pathomechanics. Quantitative, Qualitative EMG **Chapter 20-** Anthropometry **Chapter 21-** Artificial Intelligence			
	Paper-IV	Neurological Physiotherapy	**Chapter 22-** Aids and Appliances	Aids and appliance changed to Adaptive and assistive functional devices and technologies to improve neurological conditions **Added:** • Palliative care Approach • Physiotherapy Management of Cerebellar Disorders • Removed from V paper and added here - Self- treatment, management and exercise prescription for home program, report writing, Conceptual framework for clinical practice.		

				Requirements for medical opinion or treatment, documentation, prescription, management and advice		
	Paper-V	Recent advances and Evidence Based Practice in Neuro Physiotherapy	**Chapter 1**- Recent advances in Neuro physiotherapy **Chapter 8**- Self-treatment, management and exercise prescription for home program, report writing, Conceptual framework for clinical practice. Requirements for medical opinion or treatment, documentation, prescription, management and advice **Chapter 9**- Recent Neuro physiotherapy techniques **Chapter 17** – Evidences in	**Removed Chapter 1** **Removed and added in IV Paper** **In Chapter 9 added more techniques** like Hippotherapy, Transcranial Direct current stimulation, Transcranial magnetic stimulation, Artificial intelligence, Whole body vibrator and Neuro muscular technique **Chapter 17** – Evidences in physiotherapy management of myopathies **added with neuropathies and NMJ Disorders**		

			physiotherapy management of myopathies and other neurological conditions			
	Paper-IV	OBG Physiotherapy	Physiotherapy management for sexual dysfunction was given in brief	**Elaborated the topic with sub classification of sexual dysfunction with Physiotherapy management**		
	Paper-V	Recent advances and Evidence Based Practice in OBG Physiotherapy	**Chapter 12-** Recent advances in instrumentation, theories obstetrics and gynecology physical therapy techniques	**Removed chapter 12** **Added** • Recent advances in Pelvic floor assessment, Devices/Instrumentation for pelvic rehabilitation • EBP and Recent advances in PT following OBG surgeries • EBP and Recent advances in Breast disorders from menarche to menopause • Recent advances in evaluation and treatment in musculoskeletal conditions- Puberty, Reproductive and Menopausal Women		
	Paper-III	Clinical, Physical and Functional	**Content 4-** Outcome measures used in Orthopedic	**Content 4 changed to Gold standard outcome measures with high reliability**		

		diagnosis in Orthopedic Manual Physiotherapy	Manual therapy	**and validity used in** Orthopedic Manual therapy **Added** • Palpation techniques • Combined movement assessment and treatment • Clinical assessment of Autonomic nervous system • Dysfunctions associated with poor load management • ICF Model for diagnosis and management		
	Paper-IV	Orthopedic Manual therapy		**Added** • Manual therapy in sports (on field and off field) • Manual therapy in pediatrics • Pharmacotherapeutic effects on musculoskeletal system • Neuromuscular taping & McConnel taping • Manual therapy for Vestibular dysfunctions • Behavioral principles in evaluation and treatment in manual therapy • Global and local muscle training • Communication skills and empathy • Diacutaneous		

				fibrolysis		
	Paper-V	Recent advances and Evidence Based Practice in Orthopedic Manual Therapy	**Conten16**- Ergonomics assessment and management at workplace	**Removed content 16** **Added:** • Types of clinical reasoning in OMPT • Aqua Manual therapy • Recent advances in Resistive band training • Recent advances and EBP in diabetic and hypertension		
	Paper-III	Clinical, Physical and Functional diagnosis in Orthopedic Physiotherapy	**Content 4**- Outcome measures used in Orthopedic Physiotherapy **Content 15**- Pain assessment psychological effects & Illness behavior of chronic pain	**Removed Content 4 & 15** **Added:** • Clinical decision making • Application of ICF in musculoskeletal conditions • Coping strategies in chronic painful musculoskeletal conditions • Medical screening for potential referred pain and Red flags		
	Paper-IV	Orthopedic Physiotherapy	**Content 17**- Rehabilitation of congenital conditions and malformation of musculoskeletal disorders **Content 22**- Clinical decision	**Removed 17 and 22 contents** **Added:** • Assessment and management of pediatric and geriatric musculoskeletal disorders		

			making in orthopedic physiotherapy	• Physical agents and Electrotherapeutic management in Orthopedic condition • Pharmacological management in musculoskeletal disorders • Alternative therapies musculoskeletal disorders		
	Paper-V	Recent advances and Evidence Based Practice in Orthopedic Physiotherapy	**Content 6-** Pilates school of thought **Content 8-** Current trends and EBP in taping techniques	**Removed 6 and 8 contents** **Added:** • Assessment and training for core, postural stability and balance in musculoskeletal conditions • Use of advance assistive devices and technologies • EBP and recent advances of Aquatic therapy in orthopedic conditions • Understanding the basic concept and application of artificial intelligence in medical science		
	Paper-III	Clinical, Physical and Functional diagnosis in Oncological Physiotherapy	**Content 2-** Clinical measures of cardiorespiratory fitness in cancer patients **Content 4-** Clinical analysis of posture, movement & gain in cancer	**Removed contents 2,4,6,7,13,14,16 & 17** **Added:** • Clinical analysis of cardiorespiratory		

			patients **Content 6-** Clinical signs and symptoms, physical and functional evaluation in all types of cancer **Content 7-** Clinical examination and detection of movement dysfunction in cancer patients **Content 13-** EMG with reference to pathophysiology and patho-mechanics. Quantitative, Qualitative EMG **Content 14-** Physical disability evaluation and disability diagnosis **Content 16-** Assessment of pain and scales related to pain evaluation **Content 17-** Anthropometry and obesity relation in cancer	fitness , posture, gait, movement and movement dysfunction in cancer patients • Detailed lymphatic system examination • Medical intervention (radiation, chemotherapy and surgery) in cancer • Screening and examination of breast, head and neck and gynecological cancers		
	Paper-IV	Oncological Physiotherapy	**Contents were more vague**	**Brief contents with proper headings were put up**		

	Paper-V	Recent advances and Evidence Based Practice in Oncological Physiotherapy	**Content 10-** Aqua Lymphatic Therapies: An Alternate Approach to Controlling, Treating & Preventing Lymphedema	**Removed** content 10		
2019-20	**BPT II**	CONSTITUTION OF INDIA	Teaching Theory hours was **25 hours**	Teaching Theory hours is **50 hours**		
	BPT I	HUMAN ANATOMY	**University Examination-** 80 marks Theory, and **80** marks Practical and Viva – voce	**University Examination**- 80 marks Theory, and **40** marks Practical and Viva – voce		

		HUMAN PHYSIOLOGY	• **Blood content only 3 components were there**
			  • W.B.C., R.B.C., platelets formation & functions
			  • Plasma, blood groups
			  • Haemostasis, immunity
			• **NERVE MUSCLE PHYSIOLOGY**
				Blood content,
				• R.B.C- Erythropoeisis and functions,
				• Anemia- Definition and Classification,
				• WBC- types,
				• Hemoglobin - types & functions
				• Immunity- definition, classification & mechanism of humoral & cell mediated
				• Immunity, mismatched transfusion reactions topics		

			• **CARDIOVASCULAR SYSTEM:** • Dynamics of blood & lymph flow • Anatomical, biophysical consideration of arterial, arteriolar & capillary venous level, Lymphatic circulation • Origin and spread of cardiac excitation • Basic idea of electrocardiogram • Mechanical events of cardiac cycle, cardiac output, its regulation • Local & systemic regulatory mechanis	**are added** • **NERVE MUSCLE PHYSIOLOGY** • **Added** Skeletal muscle - Properties, Excitation-contraction coupling and Molecular basis of muscle contraction Electrical & mechanical properties • **CARDIOVASCULAR SYSTEM 10 Hours** • **Added** Physiological anatomy • **Added** Properties of cardiac muscle • **Added** Conduction & spread of cardiac impulse • Heart sounds – **Added** Types & causes • Cardiac cycle – **Added** Phases & Events • Cardiac output – **Added** Definition & regulation • **Added** ECG – definition, normal waves • **Added** Blood pressure – Definition & regulation		

			ms of CVS, humeral & neural • Cerebral, coronary, splanchnic, skin, placental & fetal circulation • Heart sounds **RESPIRATORY SYSTEM:** Given very briefly the topics • Physiological anatomy of lungs,	• **Added** Shock – Definition & classification • **Added** Special features of coronary circulation • **Removed** • Dynamics of blood & lymph flow • Anatomical, biophysical consideration of arterial, arteriolar & capillary venous level, Lymphatic circulation • Origin and spread of cardiac excitation • Local & systemic regulatory mechanisms of CVS, humeral & neural • Cerebral, coronary, splanchnic, skin, placental & fetal circulation **RESPIRATORY SYSTEM:** **Added:** • Surfactant- Composition and functions • Compliance- definition, normal values and functions • Dead space- definition, normal values and functions • Lung volumes		

			mechanics of respiration • Pulmonary circulation, gas exchange in lungs • Oxygen & carbon dioxide transport • Other function of respiratory system • Neural & chemical control of breathing • Regulation of respiratory activity, non-chemical influences on respiratory activity **Cardio respiratory adjustments in health & disease** □ Exercise, high altitude, deep sea diving □ Hypoxia, hypercapnia, hypocapnia, oxygen treatment □ Asthma, emphysema, artificial respiration	and capacities- Definition and normal values **Removed Cardio respiratory adjustments in health & disease and clubbed and Expanded the topic** with flowing • Neural regulation of respiration- Name of centers and functions • Chemical regulation of respiration • Definition & Types – Hypoxia • Definition - Asphyxia, Hypo & Hypercapnia, Cyanosis • Acclimatization, Deep Sea diving • Artificial respiration **Removed** • Physiological anatomy of lungs, mechanics of respiration • Regulation of respiratory activity, non-chemical influences on respiratory activity • Pulmonary circulation, gas exchange in lungs • Other function of respiratory system **DIGESTIVE**		

			DIGESTIVE SYSTEM: Very briefly given the topics • Digestion & absorption of nutrients • Gastrointestinal secretions & their regulation • Liver & Pancreas **RENAL SYSTEM: Briefly added about the topic** • Glomerular filtration rate, clearance, tubular function • Water excretion,	**SYSTEM: Expanded some of the topics and added more components in detail** **Added:** • Saliva- composition and functions • Gastric secretions- composition, mechanism of secretion and its regulation, functions • Pancreatic Secretions- composition and functions • Intestinal secretions- composition and functions • Functions of Liver • Bile- composition and functions • Jaundice- definition and types • Deglutition & Intestinal motility (small • & large intestine) **RENAL SYSTEM: Expanded the topic and added more points to the topic** **Added:** • Physiological Anatomy – Types of Nephron & JG		

			concentration of urine- regulation of Na, Cl, K excretion • Physiology of urinary bladder **NERVOUS SYSTEM: Functions of nervous system (descriptive): briefly it was there** **EXERCISE & WORK PHYSIOLOGY** **The topic was vast and was more detailed** • Introduction to work and exercise physiology • Effects of exercise on neuro-muscular system, cardio-pulmonary system, musculoskeletal system, hormonal system, blood, metabolic functions,	apparatus • Micturition reflex • Artificial Kidney • Mechanism of urine formation – Steps **NERVOUS SYSTEM: Topics added and explained each component in detail** • Organization of CNS & ANS, CSF – circulation & functions • Synapse - Classification & Properties • Reflex arc, Classification and Properties of reflexes • Receptors – Classification • Sensory Pathways - Dorsal & Anterolateral tracts • Types, Pathway, Modulation, Referred pain • Motor Pathways- Pyramidal tract, differences between UMN & LMN lesions • Functions & Applied aspects: Cerebellum, Basal ganglia, Hypothalamus • Tone and Posture		

			oxygen transport • Effects of exercise on body fluid and electrolyte balance, mobility and body composition • Effect of gravity / altitude /acceleration / pressure on physical parameters **REPRODUCTIVE SYSTEM:** Topic Endocrinology was in **miscellaneous** heading Topic Special senses: vision, audition, taste, smell was in **miscellaneous** heading **Miscellaneous topics** Skin Physiology of aging	**Removed Sub heading/Topic of Neural control of development and movement** **Topic name changed as EXERCISE PHYSIOLOGY and added specific details required for syllabus** • Effects of exercise on neuro-muscular system, cardio-pulmonary system, musculoskeletal system, hormonal system, blood, metabolic functions **REPRODUCTIVE SYSTEM:** **Same topics but added only classification** • Contraceptive methods - **Classification** **Separate heading is made and added details of Endocrinology system topics** **Added Special senses topic to the syllabus in detail with specific needs**		

			Practical Contents: Clinical assessment: Given combined sessions **AMPHIBIAN EXPERIMENTS: Asked more detail about the topic**	**Removed these topics** • Skin • Physiology of aging **Practical Contents: CLINICAL PRACTICALS: In systemic way the practical sessions are divided** **AMPHIBIAN GRAPHS: Here added specific to the topic** **Added** **RECOMMENDED DEMONSTRATIONS** Calculation of blood indices, Pulmonary function tests (spirometry), Artificial respiration, Normal ECG interpretation, Ergography & work done		
	BPT I	Biochemistry	**Nutrition:** Given in brief about the topic **Carbohydrates:** Given in brief about the topic **Proteins: Given very brief about the topic** • Definition, classification of proteins and amino	**Removed Biochemical perspective content and added Cell biology to the syllabus** **Nutrition: Added more content to the topic** • Introduction, Calorific values, • Respiratory quotient – Definition, and its significance • Energy		

			acids, their bio-medical importance and general functions. • Enzymes: definition, co-enzymes, factors affecting enzyme activity. • Digestion and absorption of proteins. • Clinical aspects: PEM, kwashiorkor, marasmus, common protein deficiency disorders **Lipids:** **Vitamins:** • Definition, Classification, Chemistry **Minerals:** **Molecular biology (In brief):** **Briefly it was given** • Nucleotides: chemistry and metabolism • DNA structure and function • Definitions of replication, Translation • Molecular genetics • Gene therapy	requirement of a person – • Special dynamic action of food • Physical activities - Energy expenditure for various activities. • Calculation of energy requirement of a person • Balanced diet • Recommended dietary allowances • Role of carbohydrates in diet: Digestible carbohydrates and dietary fibers • Role of lipids in diet • Role of proteins in diet: Quality of proteins - Biological value, net protein utilization, Nutritional aspects of proteins- essential and non-essential amino acids. Nitrogen balance • Nutritional disorders **Carbohydrates:** **Added more content to the topic** • Physiologically important mono,		

			• **Molecular endocrinology (In brief):** • Mechanism of hormonal actions and regulations • Hormones & neurotransmitters • Hormones acting at cell surface and inside the cell • Clinical aspects **Clinical biochemistry:** • Relevance of blood levels of glucose, urea, Ca, phosphates, regulation of blood pH, bicarbonate, enzymes, lipids and lipoproteins, urine levels of sugar, creatinine, proteins.	di and polysaccharides- Glycogen, starch,cellulose • Mucopolysaccharides – hyaluronic acid, chondroitin sulphate, heparin • Digestion and absorptions of carbohydrates. • Glycolysis (aerobic, anaerobic, energetic regulation, cori's cycle) • Glycogenesis and Glycogenolysis (their regulation, role of liver and muscle glycogen), • Gluconeogenesis, Citric acid cycle with its energetics. • Hormonal regulation of blood sugar level • Clinical aspects: lactoselactose intolerance, diabetes mellitus, diabetic keto-acidosis, hypoglycemia **Proteins:** **Added more content to the topic** • Amino Acids Classification based on structure and		

			• Competitive inhibitors, clinically important enzymes • Liver and renal function Tests	nutritional importance Optical activity, isoelectric pH, physiologically active peptides • Proteins - Definition, Functions, Classification and Structure, Denaturation Plasma Proteins and their separation by electrophoresis **Lipids:** **One topic added:** Essential fatty acids and their importance **Vitamins:** **Added** • Sources, Requirement, Functions andDeficiency manifestations of vitamins: A, D, E, K, C, Thiamin, Riboflavin,Niacin, Pyridoxine, Folic Acid, Cyanocobalamin **Minerals:** **Added** Magnesium, fluoride **Molecular biology (In**		

				brief) **Added with more details** • Nucleotide and Nucleic acid Chemistry • Nucleotide composition, functions of free nucleotides in body. • Nucleic acid (DNA and RNA) chemistry: Difference between DNA and RNA • Structure of DNA (Watson and Crick model), Functions of DNA. • Structure and functions of tRNA, rRNA, mRNA. **Molecular endocrinology (In brief):** **Removed all old content and Added** • Definition, classification of Hormones (Thyroxine & Insulin) **Clinical biochemistry:** **Removed** • Relevance of blood levels of		

				glucose, urea, Ca, phosphates, regulation of blood pH, bicarbonate, enzymes, lipids and lipoproteins, urine levels of sugar, creatinine, proteins. • Competitive inhibitors, clinically important enzymes **Added** • Normal levels of blood and urine constituents, Relevance of blood and urine levels of Glucose, Urea, Uric acid, Creatinine, Calcium, Phosphates, pH and Bicarbonate. • Diagnostic and Therapeutic uses of enzymes • Glycogen storage disorders (Name of diseases, enzyme deficient and organsinvolved) • Fat metabolism in adipose tissue, fatty acid biosynthesis with its regulationand energetics. • Common hyper lipo-proteinaemias • Gout, hyperuricemia, peptic ulcers, nutritional disorders of nervous system and cardiovascular		

				system • Haem biosynthesis • Determination of immunoglobulins • Antigens, haptens • Mechanism of hormone action • Hormones acting at cell surface and inside the cell, Clinical aspects • Gene therapy • Hormones & neurotransmitters • Metabolism of bile pigments • Molecular genetics		
		HUMAN BIOMECHANICS	**Bio-mechanics of all peripheral joints** **It was given very briefly** **Posture & movement analysis:** **It was brief** **Posture:** **It was brief**	**Bio-mechanics of all peripheral joints:** **Added** more details to the topic and given more specific contents to the topic **Added** thorax topic to the content **Posture & movement analysis:** **Added** Gait analysis- Observational gait analysis**,** instrumentation/ advanced gait analysis **Posture:** **Added** Enumeration of abnormal postures		

				Practical: **Added** analysis of Posture and measurements of gait parameters		
	BPT II	EXERCISE THERAPY	**Fundamental concepts** **Human movements:** **Joint mobility:** **Soft tissue manipulations & therapeutic massage** **Relaxation** **Given in brief**	**Fundamental concepts** **Added** Voluntary/involuntary motion **Human movements:** **Added:** • Passive (relaxed, forced & continuous/mechanical) & Active (Free, assisted, assisted resisted, Resisted movements/Exercises) • Principles **Joint mobility:** **Added:** • Peripheral Joint mobilization • Joint mobilization grading – Maitland and Kaltenborn grades • Principles **Soft tissue manipulations & therapeutic massage** **Added:** • Principles • Physiologic & Therapeutic Effects		

			Suspension: **Posture:** □ Overview □ Postural mechanism □ Fundamental & derived postures □ Good & bad postures □ Causes / factors affecting posture □ Postural analysis **Human gait:** **Yogasanas:** **Stretching:**	**Relaxation:** **Added-** • Techniques - Laura Mitchell, Contract relax method, Jacobson's Progressive Muscle Relaxation technique, Alexander's relaxation technique, Breathing technique **Added Aquatic therapy topic and content which was not there in old syllabus** **Suspension:** **Added:** Equipment **Posture:** **Changed and added** • Postural dysfunctions: Causes/affecting posture / Muscle imbalances • Abnormal postures with their analysis • Postural faults • Clinical Implications **Human gait:** **Added** gait training **Yogasanas:** **Added** Application of yogasanas and		

			Specific exercises: **Mechanical agents:** **Functional reeducation:** □ Overview □ Limb activities □ Trunk activities □ Gait re-education □ Transfer activities □ Purpose and uses □ Clinical applications	pranayamas **Added New topic- Airway Clearance Techniques to the content** • Techniques – Active Cycle of Breathing Techniques, Autogenic Drainage • Postural Drainage for pediatric population and at home • Techniques - PEP mask, Flutter therapy, High velocity chest compressions **Stretching:** **Added-** □ Physiology of stretching – stretch reflex □ Assessment of tightness **Specific exercises: Added** □ Proprioceptive exercises □ Codman's Pendular exercises, Shoulder Wheel exercises □ Plyometric exercises □ Isokinetic exercises **Added Exercise Planning & Prescription content to the syllabus which was not there in older syllabus**		

			Practical Contents: 1.Demonstrate and assess- anthropometric measurements, strength, range of motion, coordination, balance, posture and gait 2. Demonstrate and perform exercise with or without equipment (e.g., passive, active assisted, active, resisted, neuromuscular coordination i.e. Frenkel's exercises, vestibular, muscle patterning, PNF, suspension) 3. Demonstrate and perform - joint mobilization, joint	**Mechanical agents:** Added- Continuous Passive Motion **Functional reeducation & ADL training:** **Removed old content and Added ADL Training** • Bed mobility - Supine to sit, supine to side to prone, sit to stand, sit to kneel sitting to kneeling, kneeling to standing • ADL training - standing to walking to stair climbing **Practical Contents:** **Removed all Old contents and added new components for the practical** 1. Demonstrate and assess- Limb Length (Lower Limb & Upper Limb) and anthropometric measurements (Girth, Height, Weight, BMI) 2. Demonstrate and assess - Manual Muscle Testing 3.Demonstrate assessment and training: Coordination (Frenkel's exercises) & Balance 4. Abnormal postures: assessment and retraining		

			manipulation, soft tissue techniques (e.g., massage, friction, stretching) 4. Explain fitness / conditioning / endurance exercise programs 5. Demonstrate posture training and reeducation techniques 6. Gait mobility education and training with or without equipment including crutch measurement techniques 7. Neurodynamic techniques (e.g., nerve gliding/flossing exercises, balance training / proprioceptive training)	5.Pathological gait: analysis and training 6.Walking aids – identification, measurements and crutch training 7. Demonstrate, perform and prescribe exercise with or without equipment: passive, free, active assisted, resisted, Progressive Resisted exercises 8. Demonstrate and perform: PNF – patterns & Technique (for Upper and Lower limb only) 9.Demonstrate and perform: Suspension therapy (Upper limb & Lower Limb) 10.Demonstrate and perform-Peripheral joint mobilization (Maitland) 11. Therapeutic massage: Upper limb, Lower limb, Back, Face, Neck 12.Demonstrate and perform – Assessment of muscle length and stretching (Passive & Active) 13.Specific exercises: Breathing exercises, William's exercises, Facial exercises, Proprioceptive exercises 14. Techniques to optimize oxygen transport and facilitate airway clearance (e.g., postural drainage, chest manipulations, forced		

				expiratory techniques) 15.Demonstration of patient position for mechanical lumbar and cervical tractions, perform manual cervical and lumbar traction, continuous passive motion 16.Demonstrate functional reeducation: Bed mobility and ADL training activities 17.Aerobic Exercise program – Circuit training 18.Yogasanas and Pranayama **[demo only]**		
	BPT II	ELECTRO THERAPY AND PHYSICAL AGENTS	**Electro-diagnosis:** **Advanced electrotherapy** □ Computerization in electrotherapy □ Programming of parameters for treatment of various conditions □ Combination therapy □ Recent advances as published in research articles in journals	**Electro-diagnosis:** **Added:** Electrodiagnosis, merits and demerits **Advanced electrotherapy** **Added with new modalities** □ Shock wave therapy □ Functional Electrical Stimulation □ Matrix Rhythmus Therapy □ Magnetic Therapy (PEMS)		
		MICROBIOLOGY	**Bacteriology-** **General**	**Bacteriology-Added** □ Clostridia **General Virology:**		

			Virology: **Mycology:** **Clinical / Applied Microbiology:** **Practical Content:** **Added with very briefly**	**Added:** Polio Virus **Mycology:** **Added** □ Pathogenic fungi- Aspergillus, Penicillium **Clinical/ Applied Microbiology:** **Added** Diarrhoeal diseases, **Practical Content:** **Added with systemic way** OVERVIEW OF CULTIVATION		
		PHARMACOLOGY	**General Pharmacology** **Pharmacology in peripheral nervous system and autonomic nervous system** □Overview □Classification □Cholinergic and anti-cholinergic drugs □Action, therapeutic and adverse effects □Indication and contraindications □Adrenergics and	**General Pharmacology** **Added:** • Pharmaco-kinetics • Adverse drug reaction **Pharmacology in peripheral nervous system and autonomic nervous system** **Removed** • Overview • Classification • Action, therapeutic and adverse effects • Indication and contraindications **Added:** Skeletal Muscle Relaxants **Pharmacology in**		

			antiadrenergics **Pharmacology in central nervous system** Overview Classification Action, therapeutic and adverse effects Indication and Contraindications	**central nervous system** **Removed** Overview Classification Action, therapeutic and adverse effects Indication and Contraindications **Added:** Ethyl alcohol Sedative and Hypnotics Antiepileptics Opioids Drugs for Parkinsonism **Pharmacology in inflammatory / immune conditions** **Removed:** Overview Classification Action, therapeutic and adverse effects Indication and Contraindications **Added:** NSAIDs Antihistaminics Drugs for RA & Gout Corticosteroids **Pharmacology in cardiovascular system** **Removed:** Overview Classification Action, therapeutic		

			Pharmacology in inflammatory / immune conditions: □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Pharmacology in cardiovascular system:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Pharmacology in respiratory system:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications □ Pulmonary effects of general anesthetic agents **Immunological agents and vaccines:** □ Overview	and adverse effects □ Indication and Contraindications **Added:** □ Drugs for RAS(Renin angiotensin system) □ Antianginal drugs □ Drugs for congestive heart failure □ Drugs for hypertension □ Diuretics **Pharmacology in respiratory system** **Removed:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications □ Pulmonary effects of general anesthetic agents **Added:** □ Drugs for Cough □ Drugs for Bronchial asthma **Immunological agents and vaccines** **Removed:** □ Overview □ Classification □ Purpose and uses **Added:** □ Immunomodulators		

			□ Classification □ Purpose and uses **Antimicrobial agents:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Pharmacology in endocrine system** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Pharmacology in sports:** □ Overview □ Frequently used drugs □ Indication and Contraindications □ Doping	**Antimicrobial agents** **Removed:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Added:** □ Introduction and Sulfonamides □ Beta Lactam Antibiotics □ Macrolides □ Broad Spectrum Antibiotics □ Aminoglycosides □ Quinolones □ Antiviral drugs □ Antitubercular and Antileprotic Drugs □ Antimalarial and Other Antiprotozoals **Pharmacology in endocrine system** **Removed:** □ Overview □ Classification □ Action, therapeutic and adverse effects □ Indication and Contraindications **Added:** □ Drugs for Diabetes Mellitus		

				□ Thyroid and Antithyroid drugs □ Drugs affecting calcium balance **Pharmacology in sports:** **Removed:** □ Overview □ Frequently used drugs □ Indication and Contraindications □ Doping **Added:** □ Anabolic steroids □ Drug abuse in sports		
	BPT III	COMMUNITY MEDICINE	**Only subheading was given** **Principle of epidemiology and epidemiological methods**	**Detail of Principle of epidemiology and epidemiological methods added** **Added:** • Aims of epidemiology • Measurement of mortality and morbidity • Epidemiological methods • Descriptive, analytical and Experimental studies • Uses of Epidemiology • Disease transmission • Immunity and immunizing agents • Disinfection		

			Epidemiology of communicable diseases: **Screening for diseases:** □ Overview □ Aims and objectives □ Uses **Epidemiology of non-communicable diseases and conditions** Chronic non-communicable diseases **Nutrition and health:** □ Introduction □ Classification of foods □ Nutritional profiles of principal foods □ Nutritional problems in public health □ Community nutrition programs	**Epidemiology of communicable diseases:** **Added:** Emerging and reemerging diseases **Screening for diseases:** **Removed:** □ Overview □ Aims and objectives □ Uses **Added:** • Concept of screening • Sensitivity and Specificity • Uses of screening **Epidemiology of non-communicable diseases and conditions** Chronic non-communicable diseases –**Added-** **(CHD, DM, HTN, RTA, Cancers,** **Blindness)** **Nutrition and health:** **Removed:** □ Introduction □ Classification of foods		

			Environment and health: □ Overview □ Components of environment □ Water and air pollution and public health □ Pollution control □ Disposal of waste □ Medical entomology **Occupational health:** □ Occupational environment □ Occupational hazards □ Occupational diseases □ Prevention of occupational diseases □ Social security □ Compensation acts	**Added:** □ Nutritional problems in public health-PEM Nutritional Anaemia Vitamin A deficiency and Goitre □ Food fortification and food adulteration □ Nutritional assessment **Environment and health:** **Removed:** • Overview • Pollution control **Added:** • Concept of Environment and health • Noise Pollution, Radiation • Disposal of waste –**Added Refuse, Sewage, Sullage** • Medical entomology, **Added- Integrated Vector control** **Occupational health:** **Removed:** • Social security • Compensation acts **Added:** • Occupational diseases –		

			Preventive medicine in obstetrics, pediatrics & geriatrics: □ Antenatal, intra natal and post natal care □ Care of children □ Child health problems □ Rights of child and national policy for children □ Social welfare programs for women and children □ Geriatric health problems □ Social welfare programs for elderly **Public health administration:** □ State level health programs □ National level health programs □ National leprosy eradication program □ National tuberculosis program □ National AIDS control program □ Universal immunization program □ National cancer control program □ National mental health program	**Added Pneumoconiosis, Lead poisoning, Cancers** • Prevention of occupational diseases– **Added Medical, Engineering and Legislative measures** **Preventive medicine in obstetrics, pediatrics & geriatrics:** **Removed:** • Rights of child and national policy for children • Social welfare programs for elderly **Added:** • Antenatal, intra natal and post natal care, IMR, **Added MMR, Under five clinic** **Public health administration:** **Removed:** □ State level health programs □ National level health programs □ National tuberculosis program		

			□ National diabetes control program □ National family welfare and planning program □ National sanitation and water supply program □ Polio eradication program **Disaster management:** □ Natural and man-made disasters □ Disaster impact and response □ Relief phase □ Epidemiologic surveillance and disease control □ Nutrition rehabilitation □ Disaster preparedness □ Agencies for disaster control & management **Demography and family planning** Briefly given about the topic	□ National family welfare and planning program □ National sanitation and water supply program □ Polio eradication program **Added** • RNTCP • National Programme For Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke(NPCDCS) **Disaster management:** **Removed:** □ Disaster impact and response □ Relief phase □ Epidemiologic surveillance and disease control □ Nutrition rehabilitation □ Disaster preparedness □ Agencies for disaster control & management		

				Added: • Disaster Cycle • Rehabilitation **Demography and family planning** **Added:** • Demography cycle • Contraceptive methods • Spacing and Terminal methods		
		COMMUNITY PHYSIOTHERAPY & REHABILITATION	**Specific community Physiotherapy & Rehabilitation** □ Stroke □ Spinal cord injury □ Amputation □ Traumatic brain injury □ Degenerative joint diseases □ Poliomyelitis □ Cerebral palsy and mental retardation □ Obstetrics and gynecology conditions □ Postural deformities	**Specific community Physiotherapy & Rehabilitation** **Added with specific and detailed content** **For all conditions:** • CBR based Assessment & management • Environmental barriers • Self-care, aids & appliances & utilization of resources • Recent advances in management • Pediatric Rehabilitation (Cerebral palsy and mental retardation) • Neuro-rehabilitation (Stroke, Spinal cord injury , Traumatic brain injury, Poliomyelitis) • Orthopedic rehabilitation		

			Legislative and ethical issues for persons with disabilities **Briefly given** **Practical Contents:** **Not added any contents**	(Amputation, Degenerative joint diseases, Postural deformities) **Legislative and ethical issues for persons with disabilities** **Added:** • Health issues • Financial **Removed:** Disability & issues Topic and merged with Legislative and ethical issues for persons with disabilities **Practical Contents:** **Added with contents** •Use of ICF format for patient evaluation & management • Field visits to villages/urban areas for conduct of health & disability surveys & awareness programs •Industrial visits (ergonomic evaluation & work hardening) , school visits for screening/evaluation of health problems & conduct awareness programs •Conduct of health awareness programs/camps for general public • Short term health-		

				education related project/s to be undertaken by students in the community (small group) • Planning & designing of splints, assistive devices •Report writing & journal preparation of the activities conducted (Compulsory)		
		PHYSIOTHERAPY IN PEDIATRICS	Practical content not given	**Added Practical content**		