

**BPT YEAR–III**

SL. NO.	COURSE CODE	COURSE TITLE	M / E	NO.OF TEACHING HOURS			SCHEME OF EVALUATION							TOTAL
				D	CL	P	THEORY				PRACTICAL			
							W	VV	CA	IA	P	CA	IA	
1	22PT301	GENERAL MEDICINE	M	02	--	--	80	--	10	10	--	--	--	100
2	22PT302	GENERAL SURGERY	M	02	--	--	80	--	10	10	--	--	--	100
3	22PT303	ORTHOPEDIC & TRAUMATOLOGY	M	02	--	--	80	--	10	10	--	--	--	100
4	22PT304	ORTHOPEDICS & SPORTS PHYSIOTHERAPY	M	02	--	--	100	30	10	10	--	--	--	150
5	22PT305	CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY	M	02	--	--	100	30	10	10	--	--	--	150
6	22PT371	ORTHOPEDICS & SPORTS PHYSIOTHERAPY - PRACTICAL	M	--	01	01	--	--	--	--	40	05	05	50
7	22PT372	CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY - PRACTICAL	M	--	01	01	--	--	--	--	40	05	05	50
8	22PT373	CLINICAL TRAINING	M	--	18	--	--	--	--	--	--	--	--	--
<b>GRAND TOTAL</b>				<b>10</b>	<b>20</b>	<b>02</b>	<b>440</b>	<b>60</b>	<b>50</b>	<b>50</b>	<b>80</b>	<b>10</b>	<b>10</b>	<b>700</b>
<b>TOTAL NUMBER OF HOURS/WEEK</b>				<b>32</b>	--	--	--	--	--	--	--	--	--	--

**Note:** M- Main Course, D – Didactic, CL – Clinical, P – Practical, W – Written, VV–Viva Voce, CA–Continuous Assessment, IA– Internal Assessment

**YEAR : BPT III YEAR**

**COURSE CODE : 22PT301**

**TITLE OF THE COURSE : GENERAL MEDICINE**

**COURSE OBJECTIVES**

THIS COURSE INTENDS TO FAMILIARIZE STUDENTS WITH MEDICAL TERMINOLOGY & ABBREVIATIONS FOR EFFICIENT & EFFECTIVE CHART REVIEWING & DOCUMENTATION. IT ALSO EXPLORES SELECTED SYSTEMIC DISEASES, FOCUSING ON EPIDEMIOLOGY, PATHOLOGY, HISTOLOGY, ETIOLOGY AS WELL AS PRIMARY & SECONDARY CLINICAL CHARACTERISTICS & THEIR MANAGEMENT. DISCUSSES & INTEGRATES SUBSEQUENT MEDICAL MANAGEMENT OF GENERAL, RHEUMATOLOGY, GERONTOLOGY, CARDIO- VASCULAR & RESPIRATORY SYSTEMS, TO FORMULATE APPROPRIATE INTERVENTION, INDICATIONS, PRECAUTIONS & CONTRAINDICATIONS.

**COURSE OUTCOMES:**

- **CO 1-** Gain a comprehensive understanding of the causes, manifestations, and management of conditions relevant to physiotherapy through lectures and demonstrations.
- **CO 2-** Develop insight into the etiology, pathology, and symptomatic presentation of various ailments, along with their associated functional impairments.
- **CO 3-** Acquire the ability to assess limitations imposed by diseases on therapeutic interventions, aiding in the formulation of effective treatment plans.
- **CO 4-** Cultivate a nuanced understanding of how physiological dysfunctions impact therapeutic outcomes, fostering informed and empathetic patient care practices.

COURSE TITLE –GENERAL MEDICINE													
COURSE CODE –22PT301													
Hours				Hours per week				Evaluation pattern					
Theory	Practical	Supervised practical training	Total	Th	Prac	SPT	Total	Written		Total	Practical		Total
								IA	Final Exam	Final Exam	IA	Final Exam	Final Exam
60	-	-	60	2	-	-		20	20	<b>20</b>	-	-	-

**GENERAL MEDICINE I**

S.I No.	Topic		Hours of teaching/learning
1.	<b>Infection:</b>	<b>- Must to know</b> <ul style="list-style-type: none"><li>• Effects of Infection on the body – Pathology – source and spread of infection- Pyrexia of unknown origin, bacterial: streptococcal, staphylococcal, thyroid shigella,</li></ul>	<b>3 Hours</b>

		<p>cholera, leprosy, enteric gram negatives, meningitis, encephalitis</p> <ul style="list-style-type: none"> <li>• – vaccinations – generalized infections – rashes and infection – food poisoning and gastroenteritis – sexually transmitted diseases – HIV infections and Aids, Gonorrhoea, syphilis, chlamydia</li> <li>• Polio</li> <li>• Clostridial injection, tetanus, gas gangrene</li> <li>• Covid 19, Rabies</li> <li>• Protozoal, Malaria, amoebiasis, filaria</li> </ul>	
2.	<b>Poisoning :</b>	<p>- <b>Must to know</b></p> <ul style="list-style-type: none"> <li>• Clinical features – general management – common agents in poisoning – pharmaceutical agents – drugs of misuse – chemical pesticides –Envenomation</li> <li>• Snake and Scorpion bite</li> </ul>	2 Hours
3.	<b>Endocrine diseases:</b>	<p>- <b>Must to know</b></p> <ul style="list-style-type: none"> <li>• Common presenting symptoms of Endocrine disease – common classical disease presentations, clinical features and its management;</li> <li>• Diabetes Mellitus : Etiology and pathogenesis of diabetes- clinical manifestation of the disease- management of the disease – complication of diabetes</li> <li>• Thyroid disorders, GH Disorders, DI, Calcium homeostasis – PTH, Vitamin D3, Calcitonin’s</li> <li>• Adrenal glands disorders Cushing’s, Addison’s, Conns</li> </ul>	<b>4 Hours</b>
4.	<b>Diseases of the blood :</b>	<p>- <b>Must to know</b></p> <ul style="list-style-type: none"> <li>• Examinations of blood disorders – Clinical manifestations of blood disease Anaemia – signs and symptoms – types and management, Haemophilia, VWB Disease, platelet disorders, DIC, Leukaemia’s, lymphomas, multiple myeloma.</li> </ul>	<b>4 Hours</b>

## **GENERAL MEDICINE II**

S.I No.	Topic		Theory hours
1.	<b>Diseases of the digestive system</b>	<p><b>- Must to know</b></p> <ul style="list-style-type: none"> <li>• Clinical manifestations of gastrointestinal disease – Aetiology, clinical features, diagnosis, complications and treatment of the following conditions : Reflux Oesophagitis, Ulcerative Colitis, Peptic Ulcer disease, Achalasia Cardia, Carcinoma of Oesophagus, GI bleeding, Carcinoma of Stomach, Pancreatitis, Malabsorption Syndrome, , Peritonitis, Infections of Alimentary Tract ;</li> <li>• Diarrhoea, constipation, irritable bowel syndrome.</li> <li>• Clinical manifestations of liver diseases - Aetiology, clinical features, diagnosis, complications and treatment of the following conditions : Viral Hepatitis, Wilson’s Disease, Alpha-1-antitrypsin deficiency, Tumours of the Liver, Gall stones, Cholecystitis</li> <li>• Alcoholic Liver Disease</li> </ul>	<b>7 Hours</b>
2.	<b>Cardiovascular Disease :</b>	<p><b>- Must to know</b></p> <ul style="list-style-type: none"> <li>• Examination of the Cardiovascular System – Investigations : ECG, Exercise Stress Testing, Radiology ; Clinical manifestations of Cardiovascular disease ; Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases and disorders of the heart : Pericarditis, Myocarditis, Endocarditis, Rheumatic Fever – resulting in valve disorders, Ischemic Heart Disease, Coronary Valve Disease, Congenital disorders of the Heart, Cardiac Arrest ; Examination and Investigations of diseases of arteries and veins</li> <li>• ; Hypertension: Definition, causes, classification, types, assessment, investigations and management.</li> <li>• Hyperlipidaemia, myocardial ischemia, MI, Cardiomyopathy, congenital heart disease, Aortic disease: Dissection,</li> </ul>	<b>8 Hours</b>

		Coarctation of aorta, vascular disorder: Atherosclerosis, thromboangitis obliterans	
3.	<b>Respiratory Disease</b>	<p><b>- Must to know</b></p> <ul style="list-style-type: none"> <li>• Examination of the Respiratory System – Investigations : Chest Radiographs, Pulmonary Function Testing, Arterial Blood Gas Analysis ;</li> <li>• Clinical manifestations of Lung disease ;Patterns of lung disease – Chronic Obstructive LungDisease and Restrictive Lung Disease ;</li> <li>• Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following lung diseases : Asthma, Pneumonia, Tuberculosis</li> </ul> <p><b>-Desirable to know</b></p> <ul style="list-style-type: none"> <li>• Chronic Bronchitis, Emphysema, Bronchiectasis, Cystic Fibrosis, Upper Respiratory Tract Infections, , Fungal Diseases, Interstitial Lung Diseases, Diseases of the pleura, diaphragm and chest wall ;</li> <li>• Respiratory failure – Definition, types, causes, clinical features, diagnosis and management.</li> </ul>	<b>9 Hours</b>

### GENERAL MEDICINE III

<b>S.I No.</b>	<b>Topic</b>		<b>Theory hours</b>
1.	<b>Diseases of the Skin:</b>	<p><b>-Must to know</b></p> <p>Examination and clinical manifestations of skin diseases ; Causes, clinical features and management of the following skin conditions : Leprosy, Psoriasis, Pigmentary Anomalies, Vasomotor disorders, Dermatitis, Coccal and Fungal Parasitic and Viral infections.</p>	<b>6 Hours</b>
2.	<b>Psychiatric Disorders:</b>	<p><b>- Nice to know</b></p> <ul style="list-style-type: none"> <li>• Depression, mood Disorders, OCD, Anxiety, Personality disorders, Alcohol, Sleep disorders: Insomnia, hypersomnia</li> </ul>	<b>5 Hours</b>

**Recommended books:**

1. Davidson's Principles and Practice of Medicine
2. Harrison's Internal Medicine
3. Braunwald Text of Cardiology
4. Text Book of Cardiology by Hurst

**Question Paper pattern for University Exams –**

Long Essay Answers (Answer any 2 out of 3):	$2 \times 10 = 20$ marks
Short Essay Answers (Answer any 8 out of 10):	$8 \times 5 = 40$ marks
Short Answers (Answer all 10 questions):	$10 \times 2 = 20$ marks

**COURSE CODE : 22PT302**

**TITLE OF THE COURSE : GENERAL SURGERY**

**COURSE OBJECTIVES:**

THIS COURSE INTENDS TO FAMILIARIZE STUDENTS WITH PRINCIPLES OF GENERAL SURGERY INCLUDING VARIOUS SPECIALTIES LIKE CARDIOVASCULAR, THORACIC, NEUROLOGY AND PLASTIC SURGERY. IT ALSO FAMILIARIZES THE STUDENTS WITH TERMINOLOGY AND ABBREVIATIONS FOR EFFICIENT AND EFFECTIVE CHART REVIEWING AND DOCUMENTATION. IT EXPLORES VARIOUS CONDITIONS NEEDING ATTENTION, FOCUSING ON EPIDEMIOLOGY, PATHOLOGY, AS WELL AS PRIMARY AND SECONDARY CLINICAL CHARACTERISTICS AND THEIR SURGICAL AND MEDICAL MANAGEMENT.

**COURSE OUTCOMES:**

**CO1:** To be able to acquire comprehensive knowledge on the basic conditions of general surgery, indications, contraindications, precautions and principles of general surgery and its conditions

**CO2:** To be able to understand common clinical features, etiology, pathogenesis in general surgery indicated patient

**CO3:** To collaborate with various health care professionals and optimize outcomes assessment and plan interventions pre and post general surgery in a patient

**CO4:** To comprehend the advancements and utilize evidence based practices during clinical decision making.

COURSE TITLE – <b>GENERAL SURGERY</b>													
COURSE CODE –22PT302													
Hours				Hours per week				Evaluation pattern					
Theory	Practical	Supervised practical training	Total	Th	Prac	SPT	Total	Written		Total	Practical		Total
								IA	Final Exam		Final Exam	IA	
60	-	-	60	2	-	-		20	20	<b>20</b>	-	-	-

COURSE CONTENTS		
S. No.	Topic	Hours of teaching/learning
1	Section I	5hrs
	Must Know <ul style="list-style-type: none"> <li>• Fluid, Electrolyte and Acid-Base disturbances – diagnosis and management</li> <li>• Nutrition in the surgical patient</li> </ul>	

	<ul style="list-style-type: none"> <li>● Wound healing – basic process involved in wound repair, basic phases in the healing process, clinical management of wounds, factors affecting wound healing</li> <li>● Scars – types and treatment</li> <li>● Hemostasis – components, hemostatic disorders, factors affecting bleeding during surgery</li> </ul>	
	<p>Nice to know</p> <ul style="list-style-type: none"> <li>● Transfusion therapy in surgery – blood components, complications of transfusion</li> <li>● Surgical Infections : General Post – Operative Complications and its management</li> </ul>	
2	Section – II	3hrs
	<p>Must Know</p> <ul style="list-style-type: none"> <li>● Reasons for Surgery</li> <li>● Types of anaesthesia and its affects on the patient</li> <li>● Types of Incisions</li> <li>● Clips Ligatures and Sutures</li> <li>● General Thoracic Procedures – Radiologic Diagnostic procedures</li> <li>● Endoscopy – types, Biopsy – uses and types. Overview and Drainage systems and tubes used in Surgery.</li> </ul>	
3	Section – III	4hrs
	<p>Must Know</p> <ul style="list-style-type: none"> <li>● Causes, Clinical Presentation, Diagnosis and treatment of the following Thoracic Trauma situations <ul style="list-style-type: none"> <li>➢ Airway obstruction</li> <li>➢ Pnuemothorax</li> <li>➢ Hemothorax</li> </ul> </li> </ul>	
4	Section – IV	3hrs
	<p>Must Know</p> <ul style="list-style-type: none"> <li>● Surgical Oncology – Cancer – definition, types, clinical manifestations of cancer, Staging of Cancer.</li> </ul>	
	<p>Desireable to know</p> <ul style="list-style-type: none"> <li>● Surgical procedures involved in the management of cancer.</li> </ul>	
5	Section-V	4hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Disorders of the Chest Wall, Lung and Mediastinum</li> <li>● Definition, Clinical features, diagnosis and choice of management for the following disorders <ul style="list-style-type: none"> <li>➢ chest wall deformities</li> <li>➢ chest wall tumors</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>➤ Spontaneous Pneumothorax</li> <li>➤ Pleural Effusion</li> <li>➤ Empyema Thoracis</li> <li>➤ Lung abscess</li> <li>➤ Bronchiectasis</li> <li>➤ Tuberculosis</li> <li>➤ Bronchogenic Carcinoma</li> </ul>	
6	Section- VI	5hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Disorders of the Heart – Definition, Clinical features, diagnosis and choice of management for the following disorders</li> </ul> <p><u>Congenital Heart diseases</u></p> <ul style="list-style-type: none"> <li>➤ Acyanotic congenital heart disease &amp; Cyanotic congenital heart disease</li> <li>➤ Patent Ductus Arteriosus, Coarctation of Aorta</li> <li>➤ Atrial Septal Defect, Ventricular Septal Defect</li> <li>➤ Tetralogy of Fallot</li> <li>➤ Transposition of Great Vessels</li> </ul> <p><u>Acquired Heart Disease</u></p> <ul style="list-style-type: none"> <li>➤ Mitral Stenosis &amp; Insufficiency</li> <li>➤ Aortic Stenosis and Insufficiency</li> </ul> <p><u>Ischemic Heart Disease</u></p> <ul style="list-style-type: none"> <li>➤ Coronary Artery Disease</li> </ul>	
7	Section-VII –	5hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Thoracic surgeries – Thoracotomy – Definition, Types of Incisions with emphasis to the site of incision, muscles cut and complications.</li> <li>● Lung surgeries :Pneumonectomy, Lobectomy, segmentectomy – Indications, Physiological changes and Complications ; Thoracoplasty, Pleurectomy, Pleurodesis and Decortication of the Lung</li> </ul>	
8	Section VIII	5hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Diseases of the Arteries and Veins : Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases :</li> </ul> <ul style="list-style-type: none"> <li>➤ Arteriosclerosis</li> <li>➤ Atherosclerosis</li> <li>➤ Aneurysm</li> <li>➤ Buerger’s disease</li> <li>➤ Raynaud’s Disease,</li> <li>➤ Thrombophlebitis</li> </ul>	

	<ul style="list-style-type: none"> <li>➤ Deep Vein Thrombosis</li> <li>➤ Pulmonary Embolism</li> <li>➤ Varicose Veins</li> </ul>	
9	Section IX-	4hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Definition, Indication, Incision, Physiological changes and Complications following</li> </ul> <p>Common operations -</p> <ul style="list-style-type: none"> <li>➤ Cholecystectomy</li> <li>➤ Colostomy, Ileostomy</li> <li>➤ Gastrectomy</li> <li>➤ Hernias</li> <li>➤ Appendicectomy</li> <li>➤ Mastectomy</li> <li>➤ Nephrectomy</li> <li>➤ Prostatectomy</li> </ul>	
10	Section X-	4hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Burn: Definition, Classification, Causes, Prevention, Pathological changes, Complications, Clinical Features and Management-</li> <li>➤ Skin Grafts – Types, Grafting Procedures, Survival of Skin Graft</li> <li>➤ Flaps – Types and uses of Flaps</li> </ul>	
11	Section XI	3hrs
	<p>Nice to know</p> <ul style="list-style-type: none"> <li>● ENT: Common problems of ear, otitis media, Otosclerosis, functional hearing loss and deafness, management facial palsy classification, medical and surgical management of lower motor neuron type of facial palsy.</li> </ul>	
12	Section XII-	6hrs
	<p>Must to know</p> <ul style="list-style-type: none"> <li>● Women's Health : Menstrual cycle and its disorders. Hormonal disorders of females</li> </ul> <p>obesity and female hormones</p> <ul style="list-style-type: none"> <li>● Cancer of the female reproductive organs-management</li> <li>● Infections and sexually transmitted disease in female</li> <li>● Menopause - its effects on emotions and musculoskeletal system.</li> <li>● Malnutrition and deficiencies in females.</li> <li>● Sterility pathophysiology- investigations-management.</li> <li>● Maternal physiology in pregnancy. Musculoskeletal disorders during pregnancy</li> <li>● Prenatal complications-investigations</li> </ul> <p>Management</p>	

	<ul style="list-style-type: none"> <li>● Child birth- Stages - complications-investigations-management – Pain relief in labour - Purperium - Post Natal care</li> <li>● Surgical procedures involving child birth</li> <li>● Incontinence – Types, Causes, Assessment and Management</li> <li>● Definition, Indications and Management of the following surgical procedures <ul style="list-style-type: none"> <li>➤ Hysterosalphyngography</li> <li>➤ Dilatation and Curettage</li> <li>➤ Laproscopy</li> <li>➤ Colposcopy</li> <li>➤ Hysterectomy</li> </ul> </li> </ul>	
13	Section XIII	3hrs
	<p>Must know</p> <ul style="list-style-type: none"> <li>● Ophthalmology: Ophthalmologic surgical conditions, refraction's, conjunctivitis, glaucoma, corneal ulcer, iritis, cataract, retinitis, detachment of retina, defects of extra-ocular muscles- surgical management</li> </ul>	
14	Section XIV	5hrs
	<p>Nice to know</p> <p><b>Introduction, Indications &amp; Complications of following Neurosurgeries</b></p> <ul style="list-style-type: none"> <li>● Burr-hole, Craniotomy, Cranioplasty</li> <li>● Deep brain stimulation, Neural implantation</li> <li>● Microvascular decompression surgery</li> <li>● Shunting, Embolization</li> <li>● Ablative surgery - Thalamotomy and Pallidotomy</li> <li>● Coiling of aneurysm and Clipping of aneurysm</li> </ul>	

### Recommended books:

1. General Surgical Operations – by Kirk / Williamson
2. Surgery by Nan
3. Bailey and Love's – Short Practice of Surgery
4. Chest Disease by Crofton and Douglas.
5. Patrica A Downie, Text book of Heart, Chest Vascular Disease for physiotherapists, JP Bros.

### Question Paper pattern for University Exams –

Long Essay Answers (Answer any 2 out of 3):

2 × 10 = 20 marks

Short Essay Answers (Answer any 8 out of 10):

8 × 5 = 40 marks

Short Answers (Answer all 10 questions):

10 × 2 = 20 marks

**COURSE CODE : 22PT303**

**TITLE OF THE COURSE : ORTHOPAEDICS AND TRAUMATOLOGY**

**COURSE OBJECTIVES:**

INTRODUCE THE STUDENT TO THE ORTHOPEDIC CONDITIONS WHICH COMMONLY CAUSE DISABILITY. PARTICULAR EFFORT IS MADE IN THIS COURSE TO FACILITATE THE UNDERSTANDING OF STUDENT WITH ANY DETAILS PERTAINING TO DIAGNOSIS WHICH WILL CONTRIBUTE TO THEIR UNDERSTANDING OF THE LIMITATIONS IMPOSED BY ORTHOPEDIC PATHOLOGY ON THE FUNCTIONING OF THE INDIVIDUAL.

**COURSE OUTCOMES:** At the end of the course, student will be able to:

**CO 1:** To be able to acquire comprehensive various conditions related to musculoskeletal system of human body.

**CO 2:** To be able to understand the complications and limitations acquired due to untreated or neglected treatments.

**CO 3:** To identify the disability caused due to musculoskeletal dysfunction and its impact on society.

**CO 4:** To set the treatment goals and comprehend the advancements and utilize evidence based practices during clinical decision making.

COURSE TITLE – ORTHOPAEDICS AND TRAUMATOLOGY														
COURSE CODE – 22PT303														
Hours				Hours per week				Evaluation pattern						
Th	Prac	SPT	Total	Th	Prac	SPT	Total	Theory			Th Aggregate	Practical		Th+Prac
								IA	Written exam	VV		IA	Final Exam	
60	00	00	60	2	-	-	2	20	80	-	-	-	-	100

S.No.	Content/Topic	Hours of teaching /Learning
	<b>UNIT - I</b>	<b>23</b>
1	<b>Introduction to orthopaedics.</b>	2
	<b>Must know</b>	
	Clinical examination in an Orthopedic patient. Common investigative procedures. Radiological and Imaging techniques in Orthopaedics. Inflammation and repair, Soft tissue healing.	
2	<b>Traumatology Fracture</b>	2
	<b>Must know</b>	
	Definition, types, signs and symptoms. Fracture healing, Complications of fractures. Conservative and surgical approaches. Principles of management – reduction (open/closed, immobilization etc). Subluxation/ dislocations – definition, signs and symptoms, management (conservative and operative).	
3	<b>Fractures and Dislocations of Upper Limb</b>	5
	<b>Must know</b>	
	Fractures of Upper Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures: Fractures of clavicle. Fractures of greater tuberosity and neck of humerus. Fracture shaft of humerus. Supracondylar fracture of humerus. Fractures of capitulum, radial head, olecranon, coronoid, and epicondyles. Both bone fractures of ulna and radius. Fracture of forearm – monteggia, galaезzi fracture –dislocation. Colle’s fracture. Smith’s fracture. Scaphoid fracture. Fracture of the metacarpals. Bennett’s fracture.. (Proximal and middle.) Dislocations of Upper Limb - Anterior dislocation of shoulder – mechanism of injury, clinical feature, complications, conservative management (Kocher’s and Hippocrates maneuver), surgical management (putti plat, bankart’s) etc. Recurrent dislocation of shoulder – mechanism of injury, clinical features and management. Posterior dislocation of elbow- mechanism of injury, clinical feature, complications & management	
	<b>Desirable to know</b>	2
	Fractures of scapula. Side swipe injury of elbow. Chauffer’s fracture. Fracture of the phalanges Posterior dislocation of shoulder	

4	<b>Fractures and Dislocations of lower Limb</b>	5
	<b>Must know</b>	
	Fractures and Dislocations of Lower Limb Fracture of Pelvis and Lower Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures: Fracture neck of femur – classification, clinical features, complications, management - conservative and surgical. Fractures of trochanters. Fracture shaft femur—clinical features, mechanism of injury, complications, management-conservative and surgical. Supracondylar fracture of femur. Fractures of the condyles of femur. Fracture patella. Fractures of tibial condyles. Both bones fracture of tibia and fibula. Pott’s fracture – mechanism of injury, management. Bimalleolar fracture Trimalleolar fracture Fracture calcaneum – mechanism of injury, complications and management. Fracture of talus. Fracture of metatarsals—stress fractures jone’s fracture. Fracture of phalanges. Dislocations of Lower Limb - mechanism of injury, clinical features, complications, management of the following dislocations of lower limb.. Posterior dislocation of hip. Central dislocation of hip. Dislocation of patella. Recurrent dislocation of patella.	
	<b>Desirable to know</b>	2
	Fracture of pelvis. Dupuytren’s fracture, Maisonneuve’s fracture Anterior dislocation of hip.	
5	<b>Fracture of Spine</b>	5
	<b>Must to know</b>	
	Fracture of Cervical Spine - Mechanism of injury, clinical feature complications (quadriplegia); Management- immobilization (collar, cast, brace, traction); Management for stabilization, management of complication (bladder and bowel, quadriplegia). Clay shoveller’s fracture. Hangman’s fracture. Fracture odontoid. Fracture of atlas. Fracture of Thoracic and Lumbar Regions - Mechanism of injury, clinical features, management —conservative and surgical of common fractures around thoracic and lumbar regions.Fracture of coccyx. Fracture of Rib Cage - Mechanism of injury, clinical features, management for Fracture Ribs, Fracture of sternum.	
	<b>UNIT -II</b>	17
6	<b>Soft Tissue Injuries</b>	
	<b>Must know</b>	3
	Define terms such as sprains, strains, contusion, tendinitis, rupture, tenosynovitis, tendinosis, bursitis. Mechanism of injury of each, clinical features, managements- conservative and surgical of the following soft tissue injuries: Meniscal injuries of knee. Cruciate injuries of knee. Medial and lateral collateral injuries of knee Lateral ligament of ankle. Wrist sprains. Strains- quadriceps, hamstrings, calf, biceps, triceps etc. Contusions- quadriceps, gluteal, calf, deltoid etc. Tendon ruptures-Achilles, rotator cuff muscles, biceps, pectorals etc.	

7	<b>Hand Injuries</b>	2
	<b>Must know</b>	
	Mechanism of injury, clinical features, and management of the following - Crush injuries. Flexor and extensor injuries. Burn injuries of hand.	
8	<b>Amputations</b>	2
	<b>Must know</b>	
	Definition, levels of amputation of both lower and upper limbs, indications, complications.	
9	<b>Traumatic Spinal Cord Injuries</b>	2
	<b>Must know</b>	
	Clinical features, complications, medical and surgical management of Paraplegia and Quadriplegia.	
10	<b>Deformities</b>	5
	<b>Must know</b>	
	Clinical features, complications, medical and surgical management of the following Congenital and Acquired deformities. Congenital Deformities - CTEV. CDH. Torticollis. Scoliosis. Flat foot. Vertical talus. Hand anomalies- syndactyly, polydactyly and ectrodactyly. Arthrogyposis multiplex congenita (amyoplasia congenita). Limb deficiencies- Amelia and Phocomelia. Klippel-Feil syndrome. Osteogenesis imperfecta (fragile ossium). Cervical rib. Acquired Deformities - Acquired Torticollis. Scoliosis. Kyphosis. Lordosis. Genu varum. Genu valgum. Genu recurvatum Coxa vara. Pes cavus. Hallux rigidus. Hallux valgus. Hammer toe. Metatarsalgia.	
11	<b>Disease of Bones and Joints</b>	3
	<b>Must know</b>	
	Causes, Clinical features, Complications, Management- medical and surgical of the following conditions : Infective conditions: Osteomyelitis (Acute / chronic). Brodie's abscess. TB spine and major joints like shoulder, hip, knee, ankle, elbow etc. Arthritic conditions: Pyogenic arthritis. Septic arthritis. Syphilitic infection of joints. Bone Tumors: classification, clinical features, management - medical and surgical of the following tumors : Osteoma. Osteosarcoma, Osteochondroma. Enchondroma. Ewing's sarcoma. Giant cell tumor. Multiple myeloma. Metastatic tumors. Perthes disease, Slipped Capital Femoral Epiphysis and Avascular Necrosis. Metabolic Bone Diseases: Rickets. Osteomalacia, Osteopenia. Osteoporosis.	
	<b>UNIT - III</b>	20
12	<b>Inflammatory and Degenerative Conditions</b>	2
	<b>Must know</b>	
	Causes, clinical feature, complications, deformities, radiological features, management- conservative and surgical for the	

	<p>following conditions : Osteoarthritis. Rheumatoid arthritis. Ankylosing spondylitis Gouty arthritis. Psoriatic arthritis. Hemophilic arthritis. Still's disease (juvenile rheumatoid arthritis). Charcot's joints.</p> <p>Connective Tissue Disorders- Systemic Lupus Erythematosus, Scleroderma, Dermatomyositis, Poliomyelitis, Mixed connective tissue Disease (MCTD)</p>	
13	<b>Syndromes</b>	2
	<b>Must know</b>	
	<p>Causes, Clinical features, complications, management- conservative and surgical of the following :Cervico brachial syndrome. Thoracic outlet syndrome. Vertebro- basilar syndrome. Scalenus syndrome. Costo clavicular syndrome. Levator scapulae syndrome. Piriformis syndrome.</p>	
14	<b>Neuromuscular Disorders</b>	2
	<b>Must know</b>	
	<p>Definition, causes, clinical feature, complications, management. (Multidisciplinary approach) medical and surgical of the following conditions : Cerebral palsy. Poliomyelitis. Spinal Dysraphism. Leprosy.</p>	
15	<b>Cervical and Lumbar Pathology</b>	4
	<b>Must know</b>	
	<p>Causes, clinical feature, patho- physiology, investigations, management-Medical and surgical for the following : Prolapsed intervertebral disc (PID), Spinal Canal Stenosis. Spondylosis (cervical and lumbar) Spondylolysis. Spondylolisthesis. Lumbago/ Lumbosacral strain. Sacralisation. Lumbarisation. Coccydynia. Hemivertebra.</p>	
16	<b>Orthopedic Surgeries</b>	4
	<b>Must know</b>	
	<p>Indications, Classification, Types, Principles of management of the following Surgeries : Arthrodesis. Arthroplasty (partial and total replacement). Osteotomy, External fixators. Spinal stabilization surgeries(Harrington's, Luque's, Steffi plating) etc , Limb re-attachments.</p>	
17	<b>Regional Conditions</b>	4
	<b>Must know</b>	
	<p>Definition, Clinical features and management of the following regional conditions</p> <p>Shoulder: Periarthritic shoulder (adhesive capsulitis). Rotator cuff tendinitis. Supraspinatus Tendinitis. Infraspinatus Tendinitis. Bicipital Tendinitis.Subacromial Bursitis. Elbow: Tennis Elbow. Golfer's Elbow. Olecranon Bursitis (student's elbow ). Triceps Tendinitis. Wrist and Hand: De Quervain's Tenosynovitis. Ganglion. Trigger Finger/ Thumb. Mallet Finger, Carpal Tunnel Syndrome, Dupuytren's Contracture. Pelvis and Hip : IT Band Syndrome. Piriformis Syndrome. Trochanteric Bursitis. Knee: Osteochondritis Dissecans. Prepatellar and Suprapatellar Bursitis.Popliteal Tendinitis. Patellar Tendinitis. Chondromalacia Patella.Plica Syndrome. Fat Pad Syndrome (Hoffa's syndrome). Ankle and Foot: Ankle Sprains. Plantar</p>	

	Fasciitis / Calcaneal Spur.Tarsal Tunnel Syndrome.Achilles Tendinitis.Metatarsalgia.Morton’s Neuroma.	
18	<b>Peripheral Nerve Injuries</b>	2
	<b>Must know</b>	
	Examination of following peripheral nerve injuries – <ul style="list-style-type: none"> <li>• Brachial plexus</li> <li>• Median nerve</li> <li>• Ulnar Nerve</li> <li>• Radial nerve</li> <li>• Sciatic Nerve</li> </ul>	
	<b>Desirable to know</b>	
	Conditions related to above nerve injuries	

**Books Recommended:**

1. Outline of Fractures—John CrawfordAdams.
2. Outline of Orthopedics.— John Crawford Adams.
3. Text book of Orthopedics.—Maheswari.
4. Apley’sOrthopedics.
5. Textbook of Orthopedics and Traumatology— M.N.Natarajan

**Question Paper pattern for University Exams –**

Long Essay Answers (Answer any 2 out of 3):	2 × 10 = 20 marks
Short Essay Answers (Answer any 8 out of 10):	8 × 5 = 40 marks
Short Answers (Answer all 10 questions):	10 × 2 = 20 marks

**COURSE CODE: 22PT304**

**22PT371**

**TITLE OF THE COURSE: ORTHOPEDICS & SPORTS PHYSIOTHERAPY**

**ORTHOPEDICS & SPORTS PHYSIOTHERAPY PRACTICALS**

**COURSE OBJECTIVES**

THIS COURSE SERVES TO INTEGRATE THE KNOWLEDGE GAINED BY THE STUDENTS IN CLINICAL ORTHOPEDICS WITH THE SKILLS GAINED IN EXERCISE THERAPY, ELECTRO THERAPY AND MASSAGE, THUS ENABLING THEM TO APPLY THESE IN CLINICAL SITUATIONS OF DYSFUNCTION DUE TO PATHOLOGY IN THE MUSCULOSKELETAL SYSTEM.

**COURSE OUTCOMES**

- 1). THE STUDENT WILL BE ABLE TO COMPREHEND ALL THE TOPICS IN ORTHOPEDICS AND SPORTS PHYSIOTHERAPY COURSE.
- 2). THE STUDENT WILL BE ABLE TO APPLY THE KNOWLEDGE OF ORTHOPEDICS AND SPORTS PHYSIOTHERAPY IN PATIENT CARE AND TREATMENT.
- 3). THE STUDENTS WILL BE ABLE TO HAVE A COMPLETE OVERVIEW ON THE APPLICATION OF ORTHOPEDICS AND SPORTS PHYSIOTHERAPY IN THE CLINICAL SET UP.

4). THE STUDENT SWILL BE ABLE TO THE KNOWLEDGE OF ORTHOPEDICS AND SPORTS PHYSIOTHERAPY IN THE FIELD OF SPORTS.

<p align="center"><b>Course Title :- Orthopedics and Sports Physiotherapy</b>  <b>Course Code:- 22PT304</b>  <b>Course Title :- Orthopedics and Sports Physiotherapy Practicals</b>  <b>Course Code:- 22PT371</b></p>															
<p align="center"><b>Course Credit for Orthopedics and Sports Physiotherapy</b></p>															
Hours				Hrs/Wk				Evaluation Pattern							
Th	Pr	Sct	Tot	Lec	Pr	Sct	Tot	Written		Total		Practical		Total	
100	50	0	180	2	1		3	IA	Final exam	VV	Final Exam	IA	Final exam	Final exam	
								20	100	30	150	10	40	50	
Topic Sr.No	Course content											Hours of teaching /Learning			
												Theory		Practical	
	<b>UNIT 1</b>														
1	<b>PT assessment for Orthopaedic conditions</b>											5		5	
	<b>Must to know</b>														
	SOAP format- Subjective - history taking, informed consent, personal, past, medical and socioeconomic history, chief complaints, history of present illness. Pain assessment- intensity, character, aggravating and relieving factors, site and location. Objective- on observation - body built swelling, muscle atrophy, deformities, posture and gait. On palpation- tenderness-grades, muscle spasm, swelling-methods of swelling assessment, bony prominences, soft tissue texture and integrity, warmth and vasomotor disturbances. On examination – ROM – active and passive, resisted isometric tests, limb length-apparent, true and segmental , girth measurement, muscle length testing-tightness, contracture and flexibility, manual muscle testing, peripheral neurological examination- dermatomes, myotomes and reflexes, special tests and functional tests. Prescription of home program. Documentation of case records, and follow up.														
2	<b>Fractures</b>											7		3	
	<b>Must to know</b>														
	PT management in complications - early and late - shock, compartment syndrome, VIC, fat embolism, delayed and mal union, RSD, myositis ossificans, AVN, pressure sores etc. Physiotherapy assessment in fracture cases. Aims of PT management in fracture cases - short and long term goals. Principles of PT management in														

	fractures - Guidelines for fracture treatment during period of immobilization and guidelines for treatment after immobilization period.		
3	<b>Specific fractures and dislocations:</b>	8	3
	<b>Must to know</b>		
	PT assessment and management of upper limb fractures and dislocations. PT assessment and management of lower limb fractures and dislocations including pelvis. PT assessment and management spinal fractures.		
4	<b>Physiotherapeutic techniques</b>	2	4
	<b>Must to know</b>		
	Selection and application of physiotherapeutic techniques, manoeuvre's, modalities for preventive, curative and rehabilitative means in all conditions.		
5	<b>Schools of mobilization</b>	4	4
	<b>Must to know</b>		
	Principles of various schools of thought in manual therapy. (Briefly Maitland and Mc kenzie).		
6	<b>Degenerative and Inflammatory conditions</b>	4	3
	<b>Must to know</b>		
	PT assessment and management and home program for the following conditions – Osteoarthritis - emphasis mainly on knee, hip and hand, Rheumatoid Arthritis, Ankylosing spondylitis, Gout, Perthes disease, Periarthritic shoulder. Osteoporosis- causes, predisposing factors, investigations and PT treatment.		
	<b>UNIT II</b>		
7	<b>Infective conditions</b>	3	
	<b>Must to know</b>		
	PT assessment and management for following conditions – Osteomyelitis – acute and chronic, Septic arthritis, pyogenic arthritis, TB spine and major joints - knee and hip.		
8	<b>Spinal Abnormalities</b>	3	5
	<b>Must to know</b>		
	Define, review the postural abnormalities of spinal column, clinical features, and deformities, medical and surgical management. Describe PT assessment and management and home program.		
9	<b>Congenital Deformities</b>	5	3
	<b>Must to know</b>		
	Review in detail the causes, signs and symptoms, radiological features, medical and surgical management. Describe the PT. assessment and management of the following conditions: Congenital: CTEV, CDH, Torticollis, pes planus, pes cavus and other common deformities. Acquired: scoliosis,		

	kyphosis, coxa vara, genu varum, valgum and recurvatum.		
10	<b>Cerebral palsy:</b>	2	
	<b>Must to know</b>		
	Common orthopaedic deformities, clinical features, complications, conservative and surgical management and home program with special emphasis on carrying techniques. PT management after surgical corrections.		
11	<b>Poliomyelitis</b>	2	
	<b>Must to know</b>		
	Common deformities, conservative and surgical management. PT. assessment and management after surgical corrections and reconstructive surgeries - emphasis on tendon transfer and home program.		
12	<b>Leprosy</b>	2	
	<b>Must to know</b>		
	PT Assessment, aims, and pT management after surgical procedure: tendon transfer both pre and post operatively.		
13	<b>Amputations</b>	3	3
	<b>Must to know</b>		
	Definition, levels, indications, types, PT assessment, aims, management pre and post operatively. PT management with emphasis on stump care and bandaging. Pre and post prosthetic training, checking out prosthesis, complications of amputations and its management.		
14	<b>Spinal conditions:</b>	5	5
	<b>Must to know</b>		
	Review the causes, signs and symptoms, investigations, radiological features, neurological signs. PT assessment, aims, and management and home program of the following conditions: Cervical spondylosis, Lumbar spondylosis, Spondylolisthesis, Spinal canal stenosis, Spondylolysis, Sacro-iliac joint dysfunction, Sacralisation, Lumbarisation, Intervertebral disc prolapse, Coccydynia, Spina bifida occulta.		
15	<b>Spinal Traction</b>	2	2
	<b>Must to know</b>		
	Effects of spinal traction, types of traction, modes of application, indications for spinal traction, contraindications, precautions, limitations of traction.		
16	<b>Orthopaedic surgeries</b>	4	1
	<b>Must to know</b>		
	Pre and post-operative PT assessment, goals, precautions and PT management of following surgeries such as : Arthrodesis, Osteotomy,		

	Arthroplasty-partial and total - Excision arthroplasty, excision arthroplasty with implant, interpositional arthroplasty and total replacement; Tendon transplant, Soft tissue release- tenotomy, myotomy, lengthening; Arthroscopy, Spinal stabilization, Re-attachment of limbs, External fixators, Synovectomy.		
	UNIT III		
17	<b>Shoulder joint:</b>	5	4
	<b>Must to know</b>		
	Shoulder instabilities, TOS, RSD, Impingement syndrome - conservative and Post-operative PT management. Total shoulder replacement and Hemi replacement. - Post operative PT management. AC joint injuries - rehabilitation. Rotator cuff tears- conservative and surgical repair. Subacromial decompression - Post operative PT management.		
18	<b>Elbow and forearm</b>	2	1
	<b>Must to know</b>		
	Excision of radial head - Post operative PT management. Total elbow arthroplasty- Post operative PT management.		
19	<b>Wrist and Hand</b>	2	2
	<b>Must to know</b>		
	Total wrist arthroplasty. Repair of ruptured extensor tendons. Carpal tunnel syndrome. Flexor and extensor tendon lacerations - Post operative PT management.		
20	<b>Hip Joint</b>	3	2
	<b>Must to know</b>		
	Joint surgeries - hemi and total hip replacement - Post operative PT management Tendonitis and bursitis - Management.		
21	<b>Knee joint</b>	5	3
	<b>Must to know</b>		
	Lateral retinacular release, chondroplasty- Post operative management. Realignment of extensor mechanism. ACL and PCL reconstruction surgeries - Post operative rehabilitation. Meniscectomy and meniscal repair - Post operative management. Plica syndrome, patellar dysfunction and Hoffa's syndrome- conservative management. TKR- rehabilitation protocol. Patellar tendon ruptures and Patellectomy- rehabilitation.		
22	<b>Ankle and foot</b>	1	2
	<b>Must to know</b>		
	Ankle instability. Ligamentous tears- Post operative management.		

23	<b>Prosthesis and Orthotics</b>	6	
	<b>Must to know</b>		
	Introduction to Bio-Engineering ; Classification of Orthoses and prostheses; Biomechanical principles of orthotic and prosthetic application; Designing of upper extremity, lower extremity and spinal orthosis, indications and check out; Designing of upper extremity and lower extremity prostheses, indications and check out; Psychological aspects of orthotic and prosthetic application; prescription and designing of footwear and modifications.		
24	<b>Sports Physiotherapy</b>	4	2
	<b>Must to know</b>		
	Physical fitness. Stages of soft tissue healing. Treatment guidelines for soft tissue injuries- Acute, Sub acute and chronic stages. Repair of soft tissues-rupture of muscle, tendon and Ligamentous tears. Soft tissue injuries- prevention and rehabilitation of, Lateral ligament sprain of ankle. Rotator cuff injuries. Collateral and Cruciate injuries of knee. Meniscal injuries of knee. Supraspinatus and Bicipital tendonitis. Pre patellar and Subacromial bursitis. Tennis and Golfer's elbow. Hamstring strains, Quadriceps contusion, TA rupture. Dequervain's tenosynovitis. Trigger and Mallet finger. Plantar fasciitis. Wrist sprains		
25	<b>Yoga</b>	1	3
	<b>Must to know</b>		
	Applied Yoga in orthopaedic conditions		
	<b>Desirable to know</b>		
26	Physiotherapy Management for Tumours of the bone.	1	
	<b>Nice to know</b>		
27	Radiological positions, angle calculations for Orthopaedic problems using X ray	1	

### **Books Recommended:**

1. Outline of Fractures—John CrawfordAdams.
2. Outline of Orthopedics.— John Crawford Adams.
3. Text book of Orthopedics.—Maheswari.
4. Apley'sOrthopedics.
5. Textbook of Orthopedics and Traumatology— M.N.Natarajan

**Question Paper pattern for University Exams –**

Long Essay Answers (Answer any 2 out of 3):	2 × 10 = 20 marks
Short Essay Answers (Answer any 12 out of 14):	12 × 5 = 60 marks
Short Answers (Answer all 10 questions):	10 × 2 = 20 marks

**COURSE CODE: 22PT305**

**22PT372**

**TITLE OF THE COURSE: CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY**

**CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY PRACTICALS**

**COURSE OBJECTIVES:**

THIS COURSE SERVES TO INTEGRATE THE KNOWLEDGE GAINED BY THE STUDENTS IN CLINICAL CARDIORESPIRATORY CONDITIONS WITH THE SKILLS GAINED IN EXERCISE THERAPY, ELECTRO THERAPY AND MASSAGE, THUS ENABLING THEM TO APPLY THESE IN CLINICAL SITUATIONS OF DYSFUNCTION DUE TO PATHOLOGY IN THE CARDIO- RESPIRATORY PATHOLOGY

**COURSE OUTCOMES:** At the end of course, student shall be able to:

**CO 1:** To be able to acquire comprehensive knowledge of cardiovascular and respiratory conditions and management.

**CO 2:** To be able to demonstrate the different treatment and management techniques that improves patient's overall health.

**CO 3:** To regularly upgrade himself with evidence based practices and learn to contribute towards professional development.

**CO 4:** To understand the importance of ethical conduct throughout clinical practice and aware the society about the importance of health.

<b>COURSE TITLE – CARDIO-RESPIRATORY &amp; GENERAL PHYSIOTHERAPY</b> <b>CARDIO-RESPIRATORY &amp; GENERAL PHYSIOTHERAPY PRACTICALS</b> <b>COURSE CODE – 22PT305</b> <b>22PT372</b>														
<b>Hours</b>				<b>Hours per week</b>				<b>Evaluation pattern</b>						
Th	Prac	SPT	Total	Th	Prac	SPT	Total	Theory			Theory Aggregate	Practical		Th+Prac Final Exam
								IA	Written exam	V V		IA	Final Exam	
100	120	0	250	2	1	0	3	20	100	30	150	-	50	200

Sr. No.	Topic /Course Content	Hours of teaching/learning	
		Theory	Practical
<b>UNIT I</b>			
1	<b>Basics of Human Respiratory System</b>	4	-
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>Anatomical and Physiological differences between the Adult and Pediatric lung</li> <li>Basics of Circulatory System</li> </ul>	2 2	
2	<b>Bedside assessment of the patient</b>	6	8
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>Assessment of an Adult Respiratory and Cardiac conditions</li> <li>Assessment of a Paediatric Respiratory and Cardiac conditions</li> </ul>	3 3	5 3
3	<b>Radiological &amp; biochemical &amp; Haematological investigations</b>	8	
	<b>Must know</b>		
	Interpretation & correlate of following investigations with clinical findings and diagnosis of cardio respiratory dysfunction - <ul style="list-style-type: none"> <li>Biochemical analysis-serum enzymes, C.P.K levels,</li> <li>L.D.H., S.G.O.T., S.G.P.T.</li> <li>Troponin T,</li> <li>Lipid profile,</li> <li>Chest X-ray</li> <li>CT Thorax</li> <li>2-D Echo</li> </ul>		

	<ul style="list-style-type: none"> <li>• ECG</li> <li>• PFT</li> <li>• ABG</li> <li>• ABI</li> </ul>		
	<b>EXERCISE TOLERANCE TESTING</b>	<b>2</b>	<b>2</b>
	<ul style="list-style-type: none"> <li>• SIMPLE TESTS - ON FIELD TESTS, 6MIN WALK TEST, SHUTTLE WALK TEST</li> <li>• GRADED EXERCISE TESTS- PROTOCOLS IN TREADMILL AND CYCLE ERGOMETRY</li> </ul>		
4	<b>Physiotherapy techniques to increase lung volume</b>	<b>4</b>	<b>6</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Positioning and Mobilization</li> <li>• Breathing exercises</li> <li>• Neurophysiological Facilitation of Respiration</li> <li>• Mechanical aids: Incentive Spirometry, CPAP, IPPB</li> </ul>		
5	<b>Physiotherapy techniques to decrease work of breathing</b>	<b>3</b>	<b>2</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Positioning</li> <li>• Breathing re-education – Breathing control techniques Mechanical aids – IPPB, CPAP, BiPAP</li> </ul>		
	<b>Desirable to Know</b>		
	<ul style="list-style-type: none"> <li>• Energy Conservation Techniques</li> </ul>		
6	<b>Physiotherapy techniques to clear secretions</b>	<b>6</b>	<b>6</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Hydration, Humidification &amp; Nebulisation</li> <li>• Mobilization and Breathing exercises</li> <li>• Postural Drainage</li> <li>• Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage</li> <li>• Mechanical Aids – PEP, Flutter, Acapella, RC Cornet, IPPB</li> <li>• Facilitation of Cough and Huff</li> <li>• Suctioning</li> </ul>		
7	<b>Drug Therapy</b>	<b>3</b>	<b>-</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Cardiac Conditions</li> <li>• Pulmonary Conditions</li> <li>• Drug delivery doses and devices like Inhalers and Nebulisers</li> <li>• Drugs to treat inflammation</li> </ul>		
8	<b>Lung Disorders &amp; their PT Management</b>	<b>4</b>	
	<b>Must know</b>		
	Obstructive, Restrictive & Mixed Patterns		
9	<b>Physiotherapy following Lung Surgeries</b>	<b>2</b>	<b>2</b>
10	<b>Management of breathlessness</b>	<b>2</b>	<b>2</b>
	<b>Must know</b>		

	<ul style="list-style-type: none"> <li>• Causes, assessment and management of breathlessness</li> <li>• Scales to measure dyspnoea</li> </ul>		
11	<b>Pulmonary Rehabilitation</b>	<b>2</b>	<b>2</b>
12	<b>Neonatal and Pediatric Physiotherapy</b>	<b>3</b>	<b>3</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Chest physiotherapy for children</li> <li>• The neonatal unit</li> <li>• Modifications of chest physiotherapy for specific neonatal disorders</li> </ul>		
	<b>Desirable to Know</b>		
	Emergencies in the neonatal unit		
13	<b>Intensive care unit</b>	<b>5</b>	<b>3</b>
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Assessment of the critically ill patients</li> <li>• Monitoring in the ICU</li> <li>• Apparatus, Airways and Tubes used in the ICU</li> <li>• Physiotherapy management in Common conditions in the ICU – Head Injury, Pulmonary Edema, Multiple Organ Failure, Neuromuscular Disease, Poisoning, Aspiration, ARDS, Shock, Smoke Inhalation, Tetanus, Lung Disease, etc.</li> <li>• NICU / PICU treatment &amp; rehabilitation</li> <li>• MOBILISATION</li> </ul>		
	<b>Desirable to Know</b>		
	Dealing with Emergency situations in ICU		
14	<b>Respiratory Failure</b>	<b>3</b>	
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Types of Respiratory Failure and its management</li> <li>• O2 therapy</li> <li>• Mechanical Ventilation</li> </ul>		
15	<b>Physiotherapy management for cardiac disorders</b>	<b>2</b>	<b>2</b>
16	<b>Physiotherapy following Cardiac Surgeries</b>		
	<b>Desirable to Know</b>		
	Physiotherapy management in Critical Cardiac Care		
17	<b>PREVENTION OF ATHEROSCLEROSIS AND CARDIOVASCULAR DISEASES Cardiac Rehabilitation</b>	<b>2</b>	<b>2</b>
18	<b>Cardio-pulmonary resuscitation.</b>	<b>1</b>	<b>1</b>
19	<b>Physiotherapy intervention in the management of Oncology Cases</b>	<b>2</b>	<b>2</b>
20	<b>PT Management of Abdominal Surgeries</b>	<b>2</b>	<b>1</b>
	<b>Must know</b>		
	Management of Pulmonary Restorative Dysfunction following Surgical procedures on Abdomen and Thorax		
21	<b>Assessment &amp;PT Management following Peripheral vascular diseases.</b>	<b>3</b>	
	<b>Must know</b>		

	Arterial Diseases Venous Diseases Lymphatic diseases - Lymphedema		
22	<b>Management of wounds and ulcers</b> <ul style="list-style-type: none"> <li>• Diabetes and its complications</li> <li>• PREVENTION AND MANAGEMENT OF PRESSURE SORES</li> <li>• Care of wounds, ulcers &amp; scars</li> <li>• U.V.R and other electro therapeutic measures for healing of wounds</li> <li>• Prevention of Hyper granulated Scars, Keloids</li> <li>• Electrotherapeutics measures for relief of pain during mobilization of scars tissues</li> </ul>	2	2
23	<b>Burns</b>	1	
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• PT management of burns, Post grafted management, Mobilization &amp; Musculoskeletal restorative exercises following burns.</li> <li>• Use of pressure garments</li> </ul>		
24	<b>Physiotherapy in dermatology</b>	2	
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• U.V.R therapy in various skin conditions; Vitiligo; Hair loss; Pigmentation; Infected wounds ulcers.</li> <li>• Faradic foot bath for Hyperhidrosis</li> <li>• Care of anaesthetic hand and foot</li> <li>• Documentation of assessment, treatment and follow up skin conditions.</li> </ul>		
	<b>Desirable to Know</b>		
	<ul style="list-style-type: none"> <li>• Evaluation, planning and management of leprosy-prescription, fitting and training with prosthetic and orthotic devices</li> </ul>		
25	<b>Physiotherapy in Obstetrics</b>	8	2
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Antenatal Care, Antenatal Education,</li> <li>• Postnatal Care</li> <li>• Electrotherapy and Exercise Therapy measures for the re-education of Ano-Urethral sphincters</li> <li>• LAMAZE BREATHING, STAGES OF LABOUR, COMPLICATIONS OF PREGNANCY</li> <li>• STAGES OF CHILD BIRTH, COMPLICATIONS OF CHILD BIRTH, FOLLOWING SURGERIES LIKE EPISIOTOMIES, DIASTASIS RECTI, VARICOSE VEINS, PUERPERIUM</li> <li>• PELVIC INFLAMMATORY DISEASES, STRESS INCONTINENCE</li> </ul>		
26	<b>Health Fitness and Promotion</b>	5	2
	<b>Must know</b>		

	<ul style="list-style-type: none"> <li>• Fitness Evaluation</li> <li>• Analysis of Body composition</li> <li>• Evaluation and prescription of Exercise</li> <li>• Factors affecting exercise Performance</li> <li>• Exercise Prescription for Specific groups : Elderly, Women and Children.</li> </ul>		
	<b>Desirable to Know</b>		
	<ul style="list-style-type: none"> <li>• Outcome Measures in Cardiovascular &amp; Pulmonary Conditions</li> <li>• Cardiorespiratory changes associated with ageing &amp; fitness program.</li> <li>• Familiarization with concept of Quality of life.</li> </ul>		
27	<b>Physiotherapy management of systemic and metabolic conditions</b>	<b>2</b>	
	<b>Must know</b>		
	Treatment, Response to exercise and Implications of Physiotherapy in the following disease conditions: Hypertension, Diabetes, Renal Failure and Obesity		
23	<b>Management of Amputations - Use of Prosthesis following</b>	<b>4</b>	
	<b>Must know</b>		
	<ul style="list-style-type: none"> <li>• Diabetes</li> <li>• PVD</li> <li>• Ulcers and gangrenes</li> </ul>		
24	<b>Applied Yoga in Cardio-respiratory conditions</b>	<b>2</b>	
25	<b>Home program and education of family members in patient care</b>	<b>2</b>	

### Recommended books:

1. Tidy's physiotherapy.
2. Cash's Text Book of Chest, Heart, Vascular Disorders for Physiotherapists.
3. The Brompton Guide to chest physiotherapy DU Gasket [Completed]
4. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz
5. Elements in Pediatric Physiotherapy – Pamela M Eckersley
6. Essentials of Cardio Pulmonary Physical Therapy by Hillegass and Sadowsky
7. Cardio pulmonary Symptoms in physical Therapy practice Cohen and Michel
8. Chest Physiotherapy in Intensive Care Unit by Mackenzi

9. Cash's Text book of General Medicine and Surgical conditions for Physiotherapists.

10. Physiotherapy in Psychiatry

11. Physical Therapy for the Cancer patient by M.C Garvey

12. Physiotherapy in Obstetrics and Gynecology by Polden

**Question Paper pattern for University Exams –**

Long Essay Answers (Answer any 2 out of 3):  $2 \times 10 = 20$  marks

Short Essay Answers (Answer any 12 out of 14):  $12 \times 5 = 60$  marks

Short Answers (Answer all 10 questions):  $10 \times 2 = 20$  marks