

3rd year B.P.T

SUBJECT: SURGERY & CLINICAL ORTHOPAEDICS

(Total Hours- 130) (Subject Code: BPT- 301)

A. Surgery

Subject Title & Code	SURGERY(BPT- 301)
Duration	50
Total Hours	
Theory	
Total Hrs/week	2 hrs/ Week
Method of Assessment	Theory

A) GENERAL SURGERY

[50 hrs Didactic – 40 hrs + Clinical 10 hrs]

Objective – At the end of the course, the candidate will be able to –

- 1] Describe the effects of surgical trauma & Anaesthesia in general
- 2] Classify, clinically evaluate & describe the surgical management in brief in
a) wound & ulcers b) Burns c) Head injuries
- 3] Describe pre-operative evaluation, surgical indications & various surgical approaches in various abdominal / thoracic / peripheral vascular conditions.
- 4] Recall the surgical approaches in the form of line diagram & will be able to describe the components of soft tissues cut to reach the target tissue & the possible post operative complications in movement.
- 5] Be able to read & interpret findings of the X ray-chest.

Syllabus

General Surgery (11hrs)

- 1] Effect of Anesthesia & surgical trauma..... (1 hr)
- 2] Fluid, Electrolyte and Acid-Base disturbances – diagnosis and management ; Nutrition in the surgical patient ; Wound healing – basic process involved in wound repair, basic phases in the healing process, clinical management of wounds, factors affecting wound healing, Hemostasis – components, hemostatic disorders, factors affecting bleeding during surgery. Transfusion therapy in surgery – blood components, complications of transfusion ; Surgical Infections ; General Post – Operative Complications and its management[6 Hours]
- 2] Inflammation – acute & chronic-signs, symptoms, complications & management (1hr)
- 3] Wounds / ulcers – classification, healing process, management (2hrs)
- 4] Common abdominal surgeries for G.I. tract, Genito-urinary system Scar during surgical approach through abdominal wall. Cholecystectomy, Colostomy, Ileostomy, Gastrectomy, Hernias, Appendicectomy Nephrectomy, Prostatectomy Scar management in brief..... (3 hrs)
- 5] Radical mastectomy – complications & management(1 hrs)
- 6] Amputation – types, sites, complications & management..... (1hr)
- 7] Burn: Definition, Classification, Causes, Prevention, Pathological changes, Complications, Clinical Features and Management. Skin Grafts – Types, Grafting Procedures, Survival of Skin Graft ; Flaps – Types and uses of Flaps..... [4 Hours]
- 8] Diseases of the Arteries and Veins : Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases : Arteriosclerosis, Atherosclerosis, Aneurysm, Buerger’s disease, Raynaud’s

Disease, Thrombophlebitis, Deep Vein Thrombosis, Pulmonary Embolism, Varicose Veins..... [3Hours]

Neuro Surgery (6 hrs)

1. Head Injury – management (1hr)
2. Intra cranial & Spinal tumors (1hr)
3. Surgeries of Head & neck in neurosurgical conditions & post operative care (2hrs)

Cardio vascular – thoracic surgery (7 hrs)

- 1] Surgical approach
- 2] Post operative complications & management in Thoractomy, Thoracoplasty, Lobectomy, pneumonectomy, Decortication, CABG, Valvular Surgery, Congenital Heart Disease Surgeries, Surgery for Peripheral Vascular Disease.

E.N.T. Surgery(5 hrs)

1. Upper respiratory track surgery & post operative care
2. Tracheostomy – indications, surgical approach & management
3. Surgery for cancer – indications & post operative care
4. Surgical procedures in VII nerve palsy
5. Vertigo

Ophthalmic Surgery(1hr)

Surgeries for III, IV & VI cranial nerve palsy

Plastic Surgery(10 hrs)

1. Skin grafts & flaps – Types, indications with special emphasis to burns, wounds, ulcers
2. Tendon transfers, with special emphasis to hand, foot & facial paralysis,
3. Keloid & Hypertrophied scar management
4. Reconstructive surgery of peripheral nerves
5. Micro vascular surgery

Clinical (10 hrs)

- A] Evaluation / presentation and recording of one case each in burns, wound & ulcer, Head Injury case, peripheral vascular condition, post Radical mastectomy, post thoracic surgery, post abdominal surgery
- B] Auscultation & its interpretation with special emphasis to Reading & interpretation of the X-ray chest.

OBSERVATION – one abdominal & one thoracic surgery & one surgery of skin graft / flap.

TEXT BOOKS

- 1] Under graduate Surgery by Nan
- 2] Bailey & Love's short practice of Surgery – 21 st edn
- 3] Textbook of surgery by S. Das
- 4] Manipal manual of surgery.

B) ORTHOPAEDICS

Subject Title & Code	ORTHOPAEDICS
Duration	New:80 hrs
Total Hours	
Theory	
Total Hrs/week	3 hrs
Method of Assessment	Theory

[80 hrs] – Didactic -55 hrs + Clinical – 25 hrs

Objectives – At the end of the course, the candidate will –

- 1] Be able to discuss the Pathophysiology, clinical manifestations & conservative / Surgical management of various traumatic & cold cases of the Musculoskeletal Conditions.
- 2] Gain the skill of clinical examination & interpretation of the preoperative cold cases & all the post-operative cases.
- 3] Will be able to read & interpret a] salient features of the X-ray of the spine & Extremities
- 4] Pathological / biochemical studies pertaining to Orthopedic conditions.
- 5] Will be able to correlate the radiological findings with the clinical findings.

Syllabus

1. Traumatology..... [3 Hours]

Fracture: 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).

2. Fractures and Dislocations of Upper Limb[6 Hours]

Fractures of Upper Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures: Fractures of clavicle and scapula. 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. Side swipe injury of elbow. Both bone fractures of ulna and radius. Fracture of forearm – Monteggia, Galeazzi fracture – dislocation. Chauffeur's fracture. Colle's fracture. Smith's fracture. Scaphoid fracture. Fracture of the metacarpals. Bennett's fracture. Fracture of the phalanges. (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-Platt, Bankart's) etc. Recurrent dislocation of shoulder. Posterior dislocation of shoulder – mechanism of injury, clinical features and management. Posterior dislocation of elbow - mechanism of injury, clinical feature, complications & management.

3. Fracture of Spine [4 Hours]

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.

4. Fractures and Dislocations of Lower Limb [5 Hours]

Fracture of Pelvis and Lower Limb - causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures:

Fracture of pelvis. 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.

Dupuytren's fracture Maisonneuve's fracture. 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. Anterior dislocation of hip. Posterior dislocation of hip. Central dislocation of hip. Dislocation of patella. Recurrent dislocation of patella.

4] Management of Metabolic disorders..... (2hr)

Osteoporosis, Osteomalacia, Rickets, Perthes disease, Slipped Capital Femoral, Epiphysis and Avascular Necrosis.

5] Brachial Plexus / Lumbo Sacral Plexus & Peripheral nerve injuries – sites, management(3hrs)

6] Congenital And Acquired Deformities

a. Deformities of the spine – Scoliosis / Kyphosis) b. Congenital Deformities - CTEV. CDH. Torticollis, Genu varum. Genu valgum. Genu recurvatum Coxa vara. Pes cavus. Hallux rigidus. Hallux valgus. Hammertoe. Metatarsalgia. c. Congenital Malformation Spina Bifida, Meningocele meningocele(4hrs)

10] Reconstructive surgery for bone lengthening..... (1hrs)

11] Reconstructive surgery in Polio & Cerebral Palsy (2hrs)

12] Inflammatory/Infectious diseases of the bone & joints e.g. T.B, Osteomyelitis.. (2hrs)

13] 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.(1hrs)

14] Surgical intervention for Arthritis like O.A., RA, Ankylosing Spondylitis... (2hrs)

15] Reconstructive surgery in soft tissue lesions of Shoulder, Knee & Ankle... (3 hrs)

16] Aetiology of Back Pain & surgical management(3 hrs)

17] Common Sports injuries / overuse injuries & management(2 hrs)

18] Joint Replacement surgeries..... (2 hrs)

19] Hand injury & management (1hrs)

20] X-rays of extremities & spine (1hrs)

CLINICAL (25 HRS)

- 1] Independent clinical orthopedic evaluation presentation & recording of
 - a] one acute soft tissue lesion [including nerve injury]
 - b] 2 cases of degenerative arthritis of extremity joint
 - c] 2 degenerative arthritis of spine
 - d] one case of acute P.I.D.
 - e] 2 chronic backaches
 - f] 1 post operative case of fractures of extremities
 - g] one traumatic paraplegia / quadriplegia

OBSERVATION –

At least 2 surgeries of # internal fixation, one knee/hip replacement & Reconstructive surgery of the tendons.

TEXT BOOKS

- 1) Adam's outline of fractures – 8th edn
- 2) Adams outline of Orthopaedics – 8th edn
- 3) Apley's textbook of Orthopaedics

SCHEME OF EXAMINATION IN THE SUBJECT – “SURGERY & ORTHOPAEDICS”

THEORY – 80 MARKS + I.A. 20 MARKS TOTAL – 100 MARKS

Theory Exam

Section A: Surgery

- Q1. MCQ's 10 Marks
- Q2. Short Answer Questions (Any 3 out of 5)... 5 marks each..... 15 Marks
- Q3. Short Notes (Any 5 out of 6) 5 marks each..... 15 Marks

Section B: Orthopaedics

- Q1. MCQ's 10 Marks
- Q2. Short Answer Questions (Any 3 out of 5)... 5 marks each..... 15 Marks
- Q3. Short Notes (Any 5 out of 6) 5 marks each..... 15 Marks

Practical Viva – 80 MARKS + I.A. 20 MARKS TOTAL – 100 MARKS

Practical Exam -

- 1] Gen. Surgery – Theory – 50 marks +Viva based on Clinical – 25 marks 75 marks
- 2] Plastic surgery – Theory ----- 25 marks
- 3] Theory-in Orthopedics ----- 50 marks
- 4] Ward exam in Clinical Orthopedics ----- 50 marks
- Total ----- 200 marks

10% of the average of the total marks to be considered as Internal assessment.

SUBJECT: GENERAL MEDICINE (Subject Code: BPT- 302)

Subject Title & Code	MEDICINE (BPT- 302)
Duration	New: 120 hrs
Total Hours	
Theory	
Total Hrs/week	3 hrs
Method of Assessment	Theory

Objective – At the end of the course, the candidate will

1] Be able to describe Etiology, Pathophysiology, Signs & Symptoms & Management of the various Endocrinal, Metabolic, Geriatric & Nutrition Deficiency conditions.

- 2] Be able to describe Etiology, Pathophysiology, Signs & Symptoms, Clinical Evaluation & Management of the various Rheumatological Cardiovascular, Respiratory & Neurological Conditions.
- 3] Acquire skill of clinical examination of Musculoskeletal, Pulmonary, Cardio-vascular & Neurological System.
- 4] Be able to interpret auscultation findings with special emphasis to pulmonary system, Chest X-ray, Blood gas analysis, P.F.T. findings, Blood studies done for Neurological & Rheumatological conditions.
- 5] Be able to describe the principles of Management at the Medical Intensive Care Unit.

Syllabus

A- CARDIO-VASULAR & RESPIRATORY MEDICINE (29 hrs)

1] Cardio-vascular diseases – (12 hrs)

a) Hypertension – systemic, I.H.D. –Myocardial infarction, Arrhythmia – classification Valvular Heart Disease – i) Congenital ii) Acquired, Rheumatic Fever, Congenital Heart Disease, Infective Endocarditis, Geriatric Cardiovascular Problems & management, ECG – Normal & Variations due to ischemia & infarction

2] Diseases of the respiratory system (17 hrs)

a) Common Infectious diseases like Tuberculosis Pneumonia, Lung Abscess, Bronchiectasis, Diseases of Pleura like Pleural Effusion, Pneumothorax,

Hydropneumothorax, Empyema, Occupational lung diseases like Silicosis Asbestosis, Pneumoconiosis, Brucellosis, Farmer's Lung , Obstructive Lung Diseases like Bronchitis, Emphysema, Bronchial Asthma, Cystic Fibrosis, Interstitial Lung Diseases, Geriatric respiratory problems & management, Intensive Medical Unit – Infrastructure & Treatment, Introduction of clinical examination – Breath sounds / X ray chest / Blood gas analysis / P.F.T.

B - NEUROLOGY (31 hrs)

1] Circulation of the brain & spinal cord ,Cerebro – vascular accidents – Thrombosis, Embolism, Haemorrhage, Stroke – Level of Lesion & Management, Extra Pyramidal lesions – Basal Ganglia, Parkinsonism, Athetosis, Chorea, Dystonia & Spasmodic Torticollis, Polyneuropathy, G B Syndrome, Diabetic, Alcoholic & SACD, Disorders & Diseases of muscle, Myopathy – Types Muscular Dystrophy – Types Inflammatory Disorders – Polymyositis & Dermatomyositis, Myotonia, Disorders of Anterior Horn Cell, Motor Neurone Disease, SMA, Syringomyelia, Peroneal Muscular Atrophy, Polio, Multiple Sclerosis, Infections of the nervous system like Encephalitis, Neurosyphilis, H I V infection, Herpes, Meningitis, Transverse Myelitis, Tabes Dorsalis & T.B. Spine, Epilepsy, Tetanus, Alzheimer's Disease, Disorders of cerebellar function, Disorders of cranial nerves & Special Senses, Disorders of Myoneural Junction – Myasthenia Gravis & Myasthenic Syndrome, Dysfunction of Autonomouns Nervous System is Spinal Cord Lesions, Neurogenic Bladder, Cerebro Spinal Fluid (1hr)

I) Formation & Absorption

II) Status in Various Disorders

19] Sexually transmitted diseases (1hr)

C - General Medicine (30 hrs)

1] Disorders of Endocrine system (4hrs)

- i) Diabetes (1hr)
- ii) Thyroid, Pituitary & Adrenal conditions (2hrs)
- iii) Calcium Metabolism (1hr)

2] Rhumatological Conditions (5 hrs)

- i) Rheumatoid Arthritis (2hrs)
- ii) S L E
- iii) S S A (3hrs)
- iv) Gout
- v) Polymyositis

3] Geriatric Conditions (5 hrs)

- i) Aging Process (1hr)
- ii) Osteoporosis (1hr)
- iii) General Health Care, Wellness Clinic (1hr)
- iv) Hypertension (1hr)

4] Nutrition Deficiency Disease (5hr)

5] Drug Abuse / Intoxication (1hr)

6]-Common conditions of the G.I. Tract -----(5 hrs)

7] Diseases of the blood : Examinations of blood disorders – Clinical manifestations of blood disease; Anemia – signs and symptoms – types and management ; Hemophilia - Cause – clinical features severity of disease – management – complications due to repeated haemorrhages – complications due to therapy..... [2 Hours]

D- DERMATOLOGY [20 HRS]

Syllabus-

- 1] Types of skin irruption- classification-weeping & Dry skin lesions
- 2] Leprosy-Types- Identification-management of neuropathic Hand & foot
- 3]-Disorders of skin pigmentation-causes-Types[special emphasis to vitiligo]-
Management
- 4) In brief bacterial scabies, fungal infection
- 5] H.I.V. & Sexually transmitted skin lesions
- 6] Auto-immune disorders-Psoriasis, Dermatitis, Dermatomyositis, S.L.E.
- 7] Diseases of the scalp-Dandruff, Hair loss, Alopecia, -mangement
- 8]-Acne-types-management

SCHEME OF EXAMINATION IN “ MEDICINE ”

THEORY – 80 MARKS + INTERNAL ASSESSMENT – 20 MARKS TOTAL – 100 MARKS

Section A-MCQ-Q-1] [20x1] single best answer

[Based on all the topics included in Medicine syllabus] ----- 20 marks

Section B-SAQ – Q2] to attempt any FIVE out of Six answers – [5 x 3]

[based on Cardiovascular or Respiratory conditions] ----- 15 marks

Q3] to attempt any THREE out of Four answers [5 x 3]

[based on Neurology] ----- 15 marks

Section C-LAQ, Q4][compulsory] based on Neurology ----- 15 marks

Q5] [based on Cardio-vascular conditions] ----- 15 marks

OR

Q6] [based on Respiratory conditions] ----- 15 marks

#L.A.Q. should specify the break up of marks e.g. [3+5+7]

INTERNAL ASSESSMENT – One test each in

- 1] Theory – General Medicine, Rheumatology & Gerontology 25 marks
 - 2] Theory – Cardio-vascular & Respiratory Medicine 50 marks
 - 3] Theory – Neurology 50 marks
 - 4] Clinical – General Medicine, Rheumatology & Gerontology 25 marks
 - 5] Clinical – Cardio-vascular & Respiratory Medicine 25 marks
 - 6] Clinical – Neurology 25 marks
 - *7] Pediatrics 50 marks
 - *8] Dermatology 50 marks
- TOTAL ----- 300 marks

Internal Assessment marks to be calculated out of 20

Recommended books:

- 1. Davidson’s Principles and Practice of Medicine
- 2. Harrison’s Internal Medicine
- 3. API- Text book of Medicine – 5th edn
- 4. Golwalla – Medicine for students

SUBJECT: OBSTETRICS/GYNAECOLOGY & PAEDIATRICS

(TOTAL- 70 HOURS) (Subject Code: BPT- 303)

A.OBSTETRICS/GYNAECOLOGY

Subject Title & Code	OBSTETRICS & GYNAECOLOGY(BPT- 303)
Duration	40 hrs
Total Hours	
Theory	

Total Hrs/week	2 hrs
Method of Assessment	Theory

Objective – at the end of the course, the candidate will

1] Be able to describe the normal & abnormal physiological events during the Puberty,

Pregnancy, Labour, Puerperium, & Pre, Peri & Post Menopause.

2] Be able to discuss common complications during Pregnancy, Labour, Puerperium &

Pre Peri & Post Menopausal stage & various aspects of Urogenital Dysfunction & the

management in brief.

3] acquire the cognitive skill of the clinical examination of Pelvic Floor.

Syllabus

1. Anatomy and physiology of female reproductive system. (2hrs)
2. Physiology of Puberty & Menstruation, Abnormalities & common problems of Menstruation e.g. Amenorrhoea, Abnormal uterine bleeding, dysmenorrhoea, endometriosis.... ... (3 hrs).
3. Uro-genital dysfunction (3hr)
 - i) Uterine prolapse – classification & management (Conservative / Surgical)
 - ii) Cystocele, Rectocele, Enterocoele
 - iii) Urinary Incontinence
4. Sterility – management(1hr)
5. Neoplasm of Female reproductive organs – surgical management(1hr)
6. Methods of family planning(1hr)

7. Pre, Peri & Post Menopause – Physiology, Complications & management ..(2hrs)
8. Labour(4hrs)
Normal – Events of Ist IIInd & III rd Stages of labour, ii) Complications during labour & management, iii) Caesarian section iv) Physiotherapy related to labour
9. Post Natal – Puerperium, lactation, Methods of Contraception, complications of repeated child bearing with small gaps(2hrs).
10. Pelvic Inflammatory Diseases with special emphasis to backache due to Gynaec / Obstetrics conditions(2hr)
11. Surgical procedures like D&C, Hysterectomy etc..... (1 hr)
12. Neoplasm of Female reproductive organs – surgical management ..(1hr)
13. Methods of family planning..... (1hr)
14. Pregnancy – Fertilization, Development of the foetus, Normal gestations, Abnormal / Multiple gestations, Common Complications during pregnancy like P I H, Eclampsia, Diabetes, Hepatitis, German Measels, TORCH infection. ...(3 hrs)
15. Diagnosis of pregnancy, physiological changes, Antenatal and Postnatal care..... (1 hr)
16. Importance of physiotherapy in gynecological disorders.

CLINICAL/ Practical

Evaluation & presentation of Two cases Each in

- a) Uro-genital dysfunction, b) Antenatal care, c) Postnatal care
- i) Following normal labour
- ii) Following Caeserean section
- d) Pelvic Inflammatory Diseases

OBSERVATION – One Normal & One Caesarian delivery, One case of Tubectomy & One Hysterectomy / Repair of the Uro-genital Prolapse. Emphasis to be given to the Urogenital dysfunction / Obstetrical conditions / age related Gynecological problem

Text Book:

- 1) Text book of Gynecology – by Dutta – New Central Book Agency
- 2) Text book of Obstetrics by Dutta – New Central Book Agency

B.Pediatrics

Subject Title & Code	Pediatrics
Duration	30 hrs
Total Hours	
Theory	
Total Hrs/week	1 hrs
Method of Assessment	Theory

Objective At the end of the course, the candidate will1] acquire knowledge in brief about intra-uterine development of the foetus2] be able to describe normal development & growth of a child, importance of Immunization, & breast-feeding & psychological aspect of development. 3] be able to describe neuromuscular, musculoskeletal, cardio-vascular & pulmonary conditions related to immunological conditions, nutritional deficiencies, infectious diseases, & genetically transmitted conditions.

4] acquire skill of clinical examination of a neonate / child with respect to neurological, musculoskeletal & respiratory function.

Syllabus

- 1] Normal intra-uterine development of foetus (1hr)
- 2] Normal development & growth (2hrs)
- 3] Immunization, Handling of the child, Significance of breast-feeding (1hr)
- 4] Common causes for Developmental disorders like Sepsis, Prematurity, Asphyxia & Hyperbilirubinemia (1hr)
- 5] Brain damage-Cerebral Palsy-types & Medical Management (2hrs)
- 6] Spinal Cord Disorders like Poliomyelities, Spinal Dysraphism, Spina Bifida, Meningocele, Myelomeningocele (2hrs)
- 7] Common infections
 - a) C.N.S. & peripheral nervous system (1hrs)
 - b) Typhoid, rubella, mumps, measles, tetanus, diphtheria, chicken pox, hepatitis(1hr)
- 8] Epilepsy (1hr)
- 9] Mental Retardation (1hr)
- 10] Genetically transmitted neuro-muscular conditions (1hr)
- 11] Malnutrition related condition (1hr)
- 12] Juvenile R A & other immunological conditions of Musculoskeletal system (1hr)
- 13] Common diseases of the respiratory system like Asthma, Bronchitis, T.B. & Pneumonia & bronchiectasis (2hrs)
- 14] Rheumatic & Congenital heart disease (2hrs)
- 15] Evaluation of baby , Immunization program, Problems and management of low birth weight infants, Paediatric basic and advance life support(BLS),

Paediatric Intensive care unit, Learning disability, Autistic spectrum disorder, Attention deficit hyperactivity disorder, Down's syndrome

CLINICAL (10 HRS)

- 1] Normal & abnormal reflexes in neonate & child
- 2] Examination of the nervous system

Text Book:

- 1) Essentials of Paediatrics – by O.P. Ghai-Inter Print publications
- 2) D.K. series in Paediatrics

SCHEME OF EXAMINATION

THEORY – 80 MARKS + I.A. 20 MARKS TOTAL – 100 MARKS

Section A: OBSTETRICS & GYNAECOLOGY (40 Marks)

- Q1. MCQ's 10 Marks
- Q2. Short Answer Questions (Any 3 out of 5)... 5 marks each..... 15 Marks
- Q3. Short Notes (Any 5 out of 6) 5 marks each..... 15 Marks

Section B: Paediatrics (40 Marks)

- Q1. MCQ's 10 Marks
- Q2. Short Answer Questions (Any 3 out of 5)... 5 marks each..... 15 Marks
- Q3. Short Notes (Any 5 out of 6) 5 marks each..... 15 Marks

Practical Viva – 80 MARKS + I.A. 20 MARKS TOTAL – 100 MARKS

Practical Exam -

- 1] Obstetrics –
- 2] Gynecology
- 3] Paediatrics

10% of the average of the total marks to be considered as Internal assessment.

SUBJECT: PHYSICAL DIAGNOSIS & MANIPULATIVE SKILLS

(Subject Code: BPT- 304)

Subject Title & Code	PHYSICAL DIAGNOSIS & MANIPULATIVE SKILLS(BPT-304)
Duration	New: 360 Hours
Total Hours	
Theory	90
Practical	270
Total Hrs/week	8
Lectures	3hrs/week
Practicals/ Clinicals	5hrs/week
Method of Assessment	Theory and Practical

Objectives

At the end of the course, the candidate will

1] Be able to describe the human development & maturation; with special emphasis to

sensory, motor, psychological & social aspects and alteration during again process.

2] Acquire the skill of detection & objective documentation of the Neurological,

Musculoskeletal, cardiovascular & pulmonary dysfunctions such as Pain, altered

muscle power mobility, endurance, limb length, posture, gait, hand function & A.D.L. in

adult & paediatric conditions & acquire skill & interpretation of Exercise tolerance test to

arrive at the Functional diagnosis as per International Classification of Functioning.

3] Acquire the skills to use on patients, the therapeutic currents, for Electro-diagnosis of

sensory, & motor dysfunction & pain.

4] Be able to describe the physiology of nerve conduction & motor units, interpretation

of Normal & Abnormal EMG, Nerve Conduction studies & Late responses.

5] Acquire the simple skills of mobilization of the extremities on models

6] Acquire the neuro therapeutics skills on models

7] Be able to do Interpretation of common investigations used for functional diagnosis.

Syllabus

1] General principles of Human development & maturation.....

[5 Hours]

a]-aspects-physical, motor, sensory, cognitive, emotional,cultural, & social;

b]-Factors influencing human development & growth- Biological

,environmental inherited; c]-Principles of maturation –i]-in general, ii]- in

anatomical directional pattern-Cephelo-caudal –proximo-distal ,centero-

lateral, Mass to specific pattern, gross to fine Motor Development of

nervous system-development ;iii]- nuerodevelopment of Hand function

2] Electrodiagnosis [12 Hours]

Bioelectricity-Physiology Of generation & propagation of action potential,- Volume conduction - a]-Therapeutic current-as a tool for electrodiagnosis-physiological principles -use of alternating & direct currents in electro-diagnosis such as sensory & Pain threshold, Pain tolerance,-Short & long pulse test, S.D. curves ,Integrated EMG, use of Biofeedback unit for assessment of muscle function b]- Principles of Electro-myography- Motor unit -Normal Characteristics- activity at rest, recruitment/frequency pattern at minimal activity, Interference pattern-abnormal E.M.G. pattern c]- Principles of nerve conduction- d]-Late responses-F-wave, H reflex, Blink reflex, e]- electro- physiological principles of assessment of Myoneural junction- f]-E.M.G. instrumentation, basic components, panel diagram, types of electrodes

3] Basics in Manual Therapy, & application in Clinical

reasoning.....[12 Hours]

a]-examination of joint- stability- normal/abnormal, b]-Mobility- assessment of accessory movement, & End feel c]-assessment of articular & extra-articular soft tissue status-differentiation of spasm, acute & chronic muscle hold, tightness /pain--original & Referred ;d]-Basic principles of mobilization skills for joints & soft tissues-(Mainland, Kaltenborn, Mulligan Mec`kenzie Muscle energy technique, myofascial stretching, Cyriax, trigger points , Neural Tissue mobilisation i.e.-slump, butler, & ULTT)- Indications, -contra-indications, Practise of Manipulative therapy basic skills of mobilization [Kaltenborn, Mulligan, Maitland, & Cyriax friction massage only] of extremities on Models.

4]-Assessment of movement dysfunction [18 Hours]

Higher functions/cranial nerves/altered muscle strength,/power /balance /endurance/ tone, spasticity, incoordination, abnormal deep & superficial

reflexes ,/limb-length discrepancy /Goniometry/Trick movements/Special Tests /Assesment Scales /altered Posture & Gait— Functional analysis as per I.C.I.D.H-II norms-Functional diagnosis-

5]-Interpretation of various investigations like - Radiological[X-rays] , routine Biochemical investigations , Electrodiagnostic findings [5 Hours]

6] Assessment of cardio -pulmonary dysfunction-Chest expansion, Abnormal breath sounds, Quality of life questionnaires /Borg scale /Principles of exercise tolerance test-assessment of vital parameters in simple functional test.-6 minutes walk test /symptom limited test/Breath holding test/ Spirometry / Peak-flowmetry -Theoretical bases of Bruce’s protocol, Astrand Protocol, & step test [10 Hours]

7) Assessment of Musculoskeletal Dysfunction [20 Hours]

i) Tightness ii) Joint Mobility iii) Muscle strength iv) Limb Length v) Trick Movement
vi) Posture vii) Gait viii) Special Test ix) Functional Diagnosis using ICF
x) Interpretation of X-ray of extremities & spine, routine, bio-chemical investigations

8] Assessment of Hand [2 Hours]

i) Sensations ii) Mobility of joints
iii) Strength iv) Special Tests like Froment’s Sign, Bunnel – Litter’s Test, Phalen’s Test, Tinel’s Sign, Wartenberg’s Sign. v) Hand Function – Precision & Power Grips

9] Assessment of pain..... [3 Hours]

i) Intensity & quality ii) Objective assessment & documentation – VAS, McGill's modified questionnaire, Numerical Rating Scale.

10] Assessment of Obesity [3 Hours]

i) Pathophysiology
ii) Assessment – BMI, Waist – Hip Ratio

Practical/ CLINICALS (270 hrs)

1] Practice of Manual Therapy in Kaltenborn, Maitland, Mulligan & Cyriax on extremities

only & only on models

2] Electro-diagnostic assessment – S D Curve, Faradic Galvanic Test, Test for Sensory & Pain Threshold, Test for Pain Tolerance.

3] Identification of abnormal breath sounds, measurement of chest expansion, pattern of breathing, Vital parameters, Grades of Dyspnoea, Rate of Perceived exertion, Ankle Brachial Index.

4] Exercise tolerance testing – 6 minutes walk test & Bruce's protocol on models only

5] Practice to Neuro Therapeutic Skills of NDT, PNF, Rood's Technique & Brunnstrom on models only.

6] Interpretation of reports – EMG, NC Studies, ABG, PFT, X-ray of Chest, Extremities & Spine & ECG.

Term work in Clinical

A] Documentation & Interpretation of following investigations

i] Electro diagnosis –

a) SDC

b) Faradic Galvanic Test

c) Test for Sensory / pain Threshold

d) Test for Pain tolerance – Any 3

ii] Cardio Vascular & Pulmonary – ABG, PFT, ECG, X-ray Chest, Exercise Tolerance

Test-1 each.

Iii] Neurological – Scales like Modified Ashworth, Berg's Balance, DGI, Glasgow

Coma, Barthel Index, STREAM Format – Any 3 & EMG & NC Studies – 2 each.

B] Case presentation with Functional diagnosis – Three cases Each in –

i] Musculoskeletal

ii] Neurological

iii] Cardiovascular & Pulmonary

To maintain the Record/Journal of the term work & to get each assignment duly signed by Head.

SCHEME OF EXAMINATION

THEORY -80 MARKS ;IA-20 MARKS TOTAL 100 MARKS

CLINICAL – 80 MARKS I.A. 20 MARKS TOTAL 100 MARKS

THEORY – Pattern of paper setting

Section A- M.C.Q. Q-1 [20 x 1] based on MUST KNOW area of entire syllabus
– 20 marks

Section B-S.A.Q. Q-2] To answer any Five out of Six [5 x 3] -----
----- 15 marks

Q3] to answer any Three out of Four [3 x 5] ----- 15 marks

#Section C-L-A QQ-4] -----
----- 15 marks

Q-5] ----- 15
marks

OR

Q6] based on ----- 15
marks

Each LAQ should give break up of 15 marks e.g. [3+5+7] etc

CLINICAL Pattern of Examination

A] Long Case – any medical or surgical condition 35 marks

[Time maximum 30 minutes for students for evaluation]

i] Psychomotor & affective – skill of History taking [5marks]

ii] Skill of clinical examination [10 marks]

iii] Skill of objective Diagnostic procedure [10 marks]

iv] Cognitive – Ability to justify bases for functional diagnosis [10 marks]

B] Short Case I] Mobilisation Technique (On Models) [10marks]

II] Neuro Therapeutic Skills – NDT / PNF / Rood's / Brunnstrom (On Models)

OR

II] Electro Diagnosis – SD Curve / Faradic Galvanic Test / Test for Sensory &
Pain Threshold & Test for pain Tolerance (On Patient) [10 marks]

OR

II] Exercise Tolerance Test (On Model) [10 marks]

- C] Spots – (Five) a] X ray
 - b] Pulmonary Function Test
 - c] Blood gas analysis [4 x 5 = 20 marks]
 - d] E.C.G.
 - e] E.M.G. / N.C. studies
- 4] Journal -----
----- 5 marks

INTERNAL ASSESSMENT

THEORY 1 Terminal & 1 Preliminary Examination of 100 marks each as per University pattern.

CLINICAL / PRACTICAL

1 Terminal & 1 Preliminary Examination of 100 marks each as per University pattern.

Internal Assessments marks should be calculated out of 20 marks in Theory & 20 marks in Clinical / Practical

SUBJECT: PHARMACOLOGY (Subject Code: BPT- 305)

Subject Title & Code	Pharmacology (BPT- 305)
Duration	New: 70 hrs
Total Hours	
Theory	
Total Hrs/week	3 hrs
Method of Assessment	Theory

Objectives: At the end of the course the candidate will be able to –

- 1] Describe Pharmacological effects of commonly used drugs by patients referred for Physiotherapy, list their adverse reactions, precautions to be taken & contraindications, formulation & route of administration.
- 2] Identify whether the pharmacological effect of the drug interferes with the Therapeutic response of Physiotherapy & vis-a-versa
- 3] Indicate the use of analgesics & anti-inflammatory agents with movement disorders with consideration of cost, efficiency, & safety for individual needs.
- 4] get the awareness of other essential & commonly used drugs by patients-
The
bases for their use & common as well as serious adverse reactions.

Syllabus:

A] MUST KNOW –

- i] Drugs described in topics 2 to 9;
- ii] Pharmacological effects & mechanism, Formulation, Route of administration, salient Pharma-kinetic feature,
- iii] adverse Reactions;
- iv] Precautions & contra-indications.

B] DESIRABLE

- I] Major group of drugs described in topics 10 to 14
- II] bases of use in indicated conditions;
- III] Common & serious Adverse Reactions

1. General Pharmacology [5 Hours]

Introduction, Definitions, Classification of drugs, Sources of drugs, Routes of drug administration, Distribution of drugs, Metabolism and Excretion of drugs Pharmacokinetics, Pharmacodynamics, Factors modifying drug response, Adverse effects.

2] Drug activity of CNS -----

----- 9 hrs

-Introduction [1hr] alcohols + Sedatives & hyphotics [2hrs], Anti-convulsions [1hrs]

Analgesics & antipyretics – specially Gout & R.A. [3 hrs] Psycho Therapeutics [1] ;General anaesthetic + local anaesthetic [1hr]

2. Autonomic Nervous system..... [5 hours]

General considerations – The Sympathetic and Parasympathetic Systems, Receptors, Somatic Nervous System, Cholinergic and Anti-Cholinergic drugs, Adrenergic and Adrenergic blocking drugs, Peripheral muscle relaxants.

3. Cardiovascular Pharmacology[10 Hours]

Drugs Used in the Treatment of Heart Failure: Digitalis, Diuretics, Vasodilators, ACE inhibitors Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors, Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators, Antiarrhythmic Drugs, Drugs Used in the Treatment of Vascular Disease and Tissue Ischemia : Vascular Disease, Hemostasis Lipid-Lowering agents, Antithrombotics, Anticoagulants and Thrombolytics Ischemic Heart Disease – Nitrates, Beta-Blockers, Calcium Channel Blockers Cerebral Ischemia, Peripheral Vascular Disease.

4] Drugs acting on Respiratory system -----

----- 4 hrs

for upper respiratory tract infections – sinusitis- cough, laryngitis, pharyngitis

[2 hr], For Bronchial asthma – [1hr] for COPD – effects of prolonged drug administration [1hr]

5. Inflammatory/Immune Diseases [14 Hours]

Non-narcotic Analgesics and Nonsteroidal Anti-Inflammatory Drugs:
Acetaminophen, NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interactins with NSAIDs

Glucocorticoids: Pharmacological Uses of Glucocorticoids, adverse effects,
Physiologic Use of Glucocorticoids Drugs Used in Treatment of Arthritic
Diseases: Rheumatoid Arthritis, Osteoarthritis, Gout Drugs Used in the
Treatment of Neuromuscular Immune/Inflmmatory Diseases: Myasthena
,gravis, Idiopathic Inflammatory Myopathies, systemic lupus Erythmatosus,
Scleroderma, Demyelinating Disease

6] Insulin [1hr] & oral anti-diabetic drugs [1hr] -----
----- 2 hrs

7] Chemo – therapy -----
----- 3 hrs

i) general principles [1hr], ii] anti Tuberculosis [1hr] , & iii] anti –leprosy
[1hr]

8] Other Chemo Therapeutic drugs -----
----- 2 hrs

i] Sulfa drugs in urinary tract infection, ii] tetra / chlora, iii] penicillin
iv] cephalosporin, v] aminoglycides, vi] Microlytic

9] Endocrine -----
----- 4 hrs

i] introduction, Thyroid & Antithyroid [1hr]; ii] Estrogen + Progesterone [1]
iii] steroids anabolic steroids [2hrs]

10] Drugs in G.I. tract -----
----- 4 hrs

I] Peptic ulcer + antiemetic [3hrs], ii] Diarrhoea & constipation [1hr]

11] Haematinics, Vitamin B; Iron -----
----- 1hrs

12] Dermatological --- Scabies – Psoriasis – Local antifungal -----
1 hrs

13] Vaccines & Sera -----
----- 1 hrs

14] Vitamin – D, Calcium, Phosphorus, Magnesium -----
- 1 hrs.

SCHEME OF EXAMINATION –

[Theory – 40 marks + Internal assessment – 10 marks]

[There shall be No L. A. Qs in this paper]

Section A Q-1, M.C.Q.- based on single best answer in MUST KNOW area -- 10
marks

* Section – B-Q-2-S.A. Q – To answer any FIVE out of six [5 X 3] -----
15 marks

* Section –C-Q-3-S.A.Q. – To answer any THREE out of four [3 x 5] -----
15 marks

* Emphasis should be given to the drugs related to Musculo-skeletal/Psycho-

Neurological / Cardio-Vascular / Respiratory conditions / analgesics & antiinflammatory conditions

INTERNAL ASSESSMENT –

Two papers – terminal and prelim examination of 40 marks each. TOTAL 80 Marks

Recommended Textbooks

- 1. Lippicott's Pharmacology.*
- 2. Essential of Medical Phramacology by Tripathi*
- 3. Text book of Medical Pharmacology by Padmaja udaykumar*
- 4. Pharmacology by N.Murugesh*
- 5. Pharmacolgy & Pharmacotherapeutics by Satoskar.*

