

Maharashtra University of Health Science, Nashik

Physiotherapy Syllabus

II – B.P.Th.

(This syllabus is applicable from 2008 – 2009 i.e. from the batch who gets admitted to the First B.P.Th course in the year – 2007-08)

Subjects – Transcript

Hours-1400

1.Pathology -----	2hrs/week (Theory)-----	50 hrs
2.Microbiology -----	1hr/week (Theory) -----	30 hrs
3.Pharmacology -----	1hr/week (Theory) -----	50 hrs
4.Kinesio Therapy -----	9hrs/week Th-100 : Pract – 200 hrs -----	300 hrs
5.Electrotherapy -----	9hrs/week Th-100 : Pract – 200 hrs -----	300 hrs
6.Psychology -----	(Theory)-----	30 hrs
7.Seminars – alternate Saturday -----		40 hrs
8.Supervised Clinical practice -----	3 hrs / day + 6days / week -----	600 hrs

(To practice clinical skills under the supervision of Senior clinical staff at the O.P.D. set up & to maintain a Register / Log book-in which the prescribed Case Histories, & written assignments are to be documented & to obtain the signature from the respective section In-charge at the end of the assignment.)

PATHOLOGY

(DIDATIC – 50 hrs)

Objectives- At the end of the course, the student will be able to-

- 1) Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs-; capacity of the body in healing process
- 2) Recall the Etio – pathogenesis, the pathological effects & the clinico – pathological correlation of common infections & non-infectious diseases.
- 3) Acquire the knowledge of concepts of neoplasia with reference to the Etiology, gross & microscopic features, diagnosis, & prognosis in different tissues, & organs of the body.
- 4) Correlate normal & altered morphology of different organ systems in different diseases needed for understanding disease process & their clinical significance (with special emphasis to neuro-musculo-skeletal & cardio-respiratory systems)

- 5) Acquire knowledge of common immunological disorders & their resultant effects on the human body.
- 6) Understand in brief, about the Hematological diseases & investigations necessary to diagnose them & determine their prognosis.

Syllabus:

- 1)
 - a) - General Pathology- Cell injury-causes, mechanism & toxic injuries with special reference to Physical, Chemical, & ionizing radiation
 - b) Reversible injury (degeneration)- types-morphology,- swelling, hyaline, fatty changes,
 - c) Intra-cellular accumulation-hyaline mucin,
 - d) Irreversible cell injury-types of necrosis- apoptosis – calcification- dystrophic & metastasis,
 - e)Extra-cellular accumulation-amyloidosis, calcification-Pathogenesis- morphology
- 2) Inflammation & Repair:-
 - a) Acute inflammation – features, causes, vascular & cellular events,
 - b) Morphologic variations,
 - c) Inflammatory cells & mediators,
 - d) Chronic inflammation:- causes, types, non-specific & granulomatous – with examples
 - e) wound healing by primary & secondary union factors promoting & delaying healing process.
 - f) Healing at various sites- including-bones, nerve & muscle
 - g)- Regeneration & repair
- 3) Immuno – pathology – (basic concepts)-
 - a) Immune system:- organization-cells- antibodies- regulation of immune responses,
 - b) Hyper-sensitivity,
 - c) Secondary immuno-deficiency including HIV,
 - d) Organ transplantation
- 4) Circulatory disturbances-
 - a) Edema - pathogenesis - types - transudates / exudates,
 - b) Chronic venous congestion- lung, liver, spleen,
 - c) Thrombosis – formation – fate – effects,
 - d) Embolism – types- clinical effects,
 - e) Infarction – types – common sites

- f) Gangrenes – types – actiopathogenesis
- g) Shock – Pathogenesis, types, morphologic changes
- 5) Deficiency disorders – Vitamins A,B,C,D,
- 6) Growth Disturbance-
 - a) Atrophy-malformation, agenesis, dysplasia,
 - b) Neoplasia classification, histogenesis, biologic behaviour, difference between benign & malignant tumour
 - c) Malignant neoplasms- grades-stages-local & distal spread,
 - d) Carcinogenesis – environmental carcinogens
 - e) Chemical, Occupational, heredity, vira,
 - f) precancerous lesions & ca in situ
 - g) Tumor & host interactions – systemic effects-metastatic or direct spread of tumors affecting bones, spinal cord, leading to paraplegia, etc.
- 7) Medical Genetics – (In Brief)
- 8) Specific Pathology:- A]- CVS
 - a) Atherosclerosis - Ischemic heart diseases – myocardial infarction – Pathogenesis / Pathology
 - b) Hypertension
 - c) C.C.F.
 - d)- Rh H.D.
 - e)- Peripheral vascular diseases
- B)- Respiratory –
 - a)- COPD,
 - b)- Pneumonia (lobar, broncho, viral),
 - c)- T. B. Primary, secondary – morphologic types,
 - d)- pleuritis, complications,
 - e)- Lung collapse - atelectasis
- C) NeuroPathology-
 - a)- Reaction of nervous tissue to injury – infection & ischaemia
 - b)- Pyogenic meningitis, TBM, Viral,
 - c)- Cerebro – vascular diseases – atherosclerosis – Thrombosis, embolism, aneurysm, hypoxia, infarction & hemorrhage.
 - d)- effects of Hypotension on CNS
 - e)- Coma
 - f)- Polio myelitis- Leprosy- Demyelinating diseases – Parkinsonism – Cerebral palsy- metachromatic leucodystrophy – Dementia – Hemiplegia / paraplegia – Pathogenesis & pathology of Wilson's disease
 - g)- SOL- (in brief)
 - h)- Peripheral nerve injury
- 9) Muscle diseases – Muscular dystrophy-hypertrophy-Pseudo-hypertrophy-altrophy- Polio-myelitis Myositis ossificans, neerosis, regeneration-Myotonia
- 10) Neuro – muscular junction – Myasthenia gravis – Myasthenic syndrome.

11) Bone & Joints - a) fracture healing – Osteomyelitis – rickets – Osteomalacia – Bone tumors

Osteoporosis

a) Spondylosis, P.I.D.- Scoliosis – Haemarthrosis – Gout – T.B.

b) Arthritis – degenerative – inflammatory – RA-Ankylosing spondylitis – Tenosynovitis

12) Urinary – commonly encountered in paralytic bladder, common urinary tract infections (brief)- urinary calculi-

13) G.I. system- (1hr)- Gastric/ duodenal ulcer, enteric fever, TB, enteritis, Gastritis (related to consumption of NSAID)

14) Endocrine – Hyperthyroidism – Diabetes

15) Hepatic diseases (1hr)- Cirrhosis – emphasis to systemic effects of portal hypertension

16) Skin-Melanin pigment disorders – Vitiligo – Tinea versicolor-Psoriasis-Bacterial/fungal infections – cutaneous TB, Scleroderma, SLE, Leprosy Alopecia

17) Clinical pathology – (including Demonstrations)

a) Anemia – (deficiency) – T.C./D.C./ Eosinophilia, E.S.R., C.P.K,

b) Muscle / skin / nerve biopsy c)- Microscopic appearance of muscle necrosis – fatty infiltration d)- Lab investigation in liver & renal failure

TEXT BOOKS –

1. Text book of Pathology - by Harsh Mohan

2. Pathologic basis of disease by Cotran, Kumar, Robbins

3. General Pathology – by Bhende

MICROBIOLOGY

Didactic – 30 hrs

Objectives: At the end of the course, the candidate will have sound knowledge of the agent responsible for causing human infections, pertaining to C.N.S., C.V.S. musculoskeletal, & Respiratory system.

Syllabus:

- 1] General Microbiology i) Introduction & scope ----- 1 hrs
- 2] Classification of Micro-organisms & morphology of Bacteria ----- 1 hrs
- 3] Sterilization & disinfection [basic concepts] ----- 2hrs
hospital acquired infection, universal safety precautions,
Biomedical waste disposal ----- 2 hrs
- 4] Immunology ----- 5 hrs
 - i) Antigen antibody – reaction & application for diagnosis;
 - ii) Immune response – normal / abnormal
 - iii) Innate immunity & acquired immunity [vaccination]
 - iv] Hyper – sensitivity & auto-immunity
- 5] Laboratory Diagnosis of Infection ----- 3hrs
- 6] Bacteriology ----- 7 hrs
 - i) Infection caused by gram +ve cocci; Gas gangrene – clostridium – Diphtheria
 - ii) Infection caused by gram –ve cocci, Septicemia-cholera – Shock –Typhoid-diarrhoea;
 - iii) Mycobacterial infection tuberculosis-Leprosy-Atypical Mycobacterium
 - iv) syphilis – morphology & pathogenesis [VDRL]
- 7] Viruses ----- 3 hrs
 - i) Introduction & general properties,
 - ii) HIV
 - iii) Hepatitis
 - iv) Polio, measles, congenital viral infections, Rubella, CMV Herpes
- 8] Mycology ----- 1 hrs
Mycetoma – Aspergilosis – candidiasis
- 9] Parasites affecting C.N.S. ----- 2 hrs
Malaria – Filaria – Toxoplasma – Cystisarcosis & echinococcus
- 10] Applied Microbiology ----- 3 hrs
as relevant to diseases involving Bones, Joints – Nerves – Muscles-Skin-brain- cardiopulmonary system, & burns.

TEXT BOOKS

Text books of Microbiology – by R. Ananthnarayan & C.K. Jayram Panikar

SCHEME OF EXAMINATION (THEORY ONLY)

#-Pathology – 50 marks + Microbiology – 30 marks = 80 marks + I.A. – 20 marks =
Total 100 marks

There shall be NO L A.Q.s in this paper

#Emphasis to be given to topics related to Muskulo Skeletal / Neurological / Cardiovascular / Respiratory conditions & Wound / Ulcers /

Section I- M.C.Q. based on Single best answer in MUST KNOW area --- time 30 min

Q-1 based on Pathology [1 x 20] ----- 20 marks

Q-2 Based on Microbiology [1 x 10] ----- 10 marks

Section B-S.A.Q. based on Pathology

Q-3 To answer Any FIVE out of Six [5 x 3] ----- 15 marks

Q-4 To answer any THREE out of Four [3 x 5] ----- 15 marks

Section C. S.A.Q. based on Microbiology

Q-5 Answer any FOUR out of Five [4 x 5] ----- 20 marks

INTERNAL ASSESSMENT

Two exams – terminal and prelim of 80 marks each – Total 160 marks

PHARMACOLOGY

[DIDACTIC – 50 hrs]

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, 11 & 12
- II] bases of use in indicated conditions;
- III] Common & serious Adverse Reactions

TOPICS -

- 1] General Pharmacology ----- 3 hrs
- Drug Pharmco-kinetics – Pharmacology – adverse reaction – factors modifying drug effect
- 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]
- 3] Drugs acting on peripheral nervous system ----- 5 hrs
i] Adrenergic ii] Cholinergic
- 4] Drug therapy in Parkinsonism ----- 2 hr
- 5] Skeletal muscle relaxants ----- 2 hr
- 6] Drugs acting on CVS ----- 6 hrs

- i] Hyper tension ii] B-blockers, iii] Ca channel ACEI, iv] blockers [prazosin] [1hr], Diuretics [1hr] CCF – [1hr] Angina [1hr] Antiarrhythmia + Shock [1hr], Drug satisfying Homeostasis [1hr]
- 7] 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]
- 8] Insulin [1hr] & oral anti-diabetic drugs [1hr] ----- 2 hrs
- 9] Chemo – therapy ----- 3 hrs
 i) general principles [1hr], ii] anti Tuberculosis [1hr] , & iii] anti –leprosy [1hr]
- 10] Other Chemo Therapeutic drugs ----- 2 hrs
 i] Sulfa drugs in urinary tract infection, ii] tetra / chlora, iii] penicillin
 iv] cephalosporin, v] aminoglycides, vi] Microlytic
- 11] Endocrine ----- 4 hrs
 i] introduction, Thyroid & Antithyroid [1hr]; ii] Estrogen + Progesterone [1] iii] steroids-
 anabolic steroids [2hrs]
- 12] Drugs in G.I. tract ----- 4 hrs
 i] Peptic ulcer + antiemetic [3hrs], ii] Diarrhoea & constipation [1hr]
- 13] Heamatinics, Vitamin B; Iron ----- 1hrs
- 14] Dermatological --- Scabies – Psoriasis – Local antifungal ----- 1 hrs
- 15] Vaccines & Sera ----- 1 hrs
- 16] Vitamin – D, Calcium, Phosphorus, Magnesium ----- 1 hrs.

TEXT BOOKS

1. Pharmacology by Gaddum
2. Medical Pharmacology by Drill
3. Pharmacology principle of Medical practice – by Krantx, & Carr
4. Pharmacological basis of Therapeutics – by Goodman, L.S. Gilman A

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 & anti-
inflammatory conditions

INTERNAL ASSESSMENT –

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

KINESIO THERAPY

[300 hrs]

Didactic – 100 hrs + Practical / laboratory – 200 hrs

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

- 1] analyze Normal human posture [static & dynamic] & various Normal musculo skeletal movements during Gait, activities of daily living, & also the normal describe the movements of the Thorax during breathing, ; in terms of Biomechanical & Physiological Principles.
- 2] Apply the biomechanical principles for the efficacy in the assessment methods for mobility, stability, muscle strength and endurance.
- 3] Describe the Biophysical properties of connective tissue, & effect of mechanical loading, & factors which influence the Muscle strength, & mobility & stability of articular & periarticular soft tissues
- 4] Describe the physiological effects, - Therapeutic uses, merits / demerits of various exercise modes.
- 5] Demonstrate various therapeutic exercises on self, also acquire the skill of application on Models.
- 6] Acquire the skill of assessment of isolated & group muscle strength, & Range of motion of the joints subjectively & objectively

Syllabus:

- 1] Biomechanics of joints of the skeletal system
[spine, extremities, T.M. joint & Thoracic cage] – Factors determining mobility & stability (Dynamic) of joint
- 2] Kinetics & Kinematics of various activities of daily living e.g. supine to sitting, sitting to standing, squatting, climbing up & down, lifting, pulling, pushing, overhead activities, walking running, jogging.
- 3] a) Assessment of muscle strength, [group/individual] subjective & objective methods 1/10 RM dynamometry – Endurance exercises
b) Factors that influence the strength of the normal muscle/hypertrophy, recruitment of motor units, change after training / type of contraction Isometric / Isotonic / Isokinetic Eccentric.
c) General principles of strength training :- overload / intensity/ Motivation/ learning/ duration/ frequency/ reversibility/ specificity –
- 4] a) Bio-physical properties of connective tissue, [contractile & non-contractile] elasticity / Plasticity – response to sudden/ slow/ sustained loading –strain curve-Creep – Hysteresis

- b] Mobilisation – Methods - stretching / traction [cervical & lumber] / Hold – Relax method-rhythmic movements/oscillations.
- c] mobilization of muscles & Fasciae-around the shoulder / elbow/wrist /Hip/knee/ankle / Spine [dorso-lumber fascia]
- 5] Methods of Assessment of the Posture – Sitting / standing/Lying/Physiological deviations of the posture
- 6] Methods of assessment of Gait-measurements for walking aids – asillary / elbow crutches, walking sticks – Pre-crutch training, crutch gaits.
- 7] Co-ordination & Balance – neural control – Methods of co-ordination exercises – Frankel's exercises.
- 8] Principle of P.N.F. [no practical]
- 9] Breathing exercises – Goals – Inspiratory – Expiratory / Segmental – Forced expiratory – coughing – huffing / Modified Inspiratory / Active cycle of breathing.
- 10] Bronchial Hygiene – postural drainage position/ humidification
- 11] Principles of Home programme & Ergonomic advise
- 12] Functional Re-education
 - a] Functional motor skills, e-Motor skills to function independently in ADL
 - b] Mobility, Bed / Wheel chair mobility, ambulation
- 13] Application of mat exercises [to practice on self & on models]
- 14] 6 Minute walk test – on models (only technique)
PRACTICAL No. 3a, 4b, 5, 6,7,9,10,12 a & 13, 14

TEXT BOOKS

- 1.Progressive resisted exercises – by Margaret Hollis,
- 2.Therapeutic Exercise by Carolyn Kisner
- 3.Kinesiology by Cynthia Norkins
- 4.PNF – Knott and Voss

REFERENCE BOOKS

- 1.Therapeutic exercise by Basmijjan & Wolf.
- 2.Muscle testing by Daniel Kendall
- 3.Clinical evaluation – Lacote (for Isolated assessment of abdominal muscles)
- 4.Muscle stretching & Auto stretching – Olaf Evjenth
- 5.Orthopaedic Evaluation – Magee (only for assessment of posture)

SCHEME OF EXAMINATION

Theory – 80 marks + Internal assessment 20 marks, ----- Total 100 marks

Practical / laboratory – 80 marks, + I.A. 20 marks ----- Total 100 marks

THEORY--- Model question paper ----

Section A-Q-1-M.C.Q. based on Single best answer – MUST KNOW area – 20marks

Section B SAQ-Q-2] Answer any FIVE out of six [5 x 3] ----- 15 marks

Q-3] Answer any THREE out of Four [3 x 5] ----- 15 marks

* Section –C-L.A.Q. – 4] [Compulsory] Based on Kinesiology ----- 15 marks

5] Therapeutic application for Muscle training / Posture / Gait ----- 15 marks

OR

Q-6] Therapeutic application for Mobility / Pulmonary function ----- 15 marks

*[LAQ should give Break up of 15 marks – e.g. [3+5+7] etc]

PRACTICAL

1. Long case – Muscle training / Mobility /Pulmonary Function training (35 marks)

2. Two Short Case :- Based on M.M.T. /Coordination/Posture / Gait/ Funct-reed etc.

(20 X 2 =40 marks)

3. Journal

(5 marks)

INTERNAL ASSESSMENT

THEORY

Two papers - terminal and prelim examination of 80 marks each **Total - 160 marks**

THEORY--- Model question paper ----

Section A-Q-1-M.C.Q. based on Single best answer – MUST KNOW area – 20marks

Section B SAQ-Q-2] Answer any FIVE out of six [5 x 3] ----- 15 marks

Q-3] Answer ant THREE out of Four [3 x 5] ----- 15 marks

* Section –C-L.A.Q. – 4] [Compulsory] Based on Kinesiology ----- 15 marks

5] Therapeutic application for Muscle training / Posture / Gait ----- 15 marks

OR

Q-6] Therapeutic application for Mobility / Pulmonary function ----- 15 marks

*[LAQ should give Break up of 15 marks – e.g. [3+5+7] etc]

I.A. to be calculated out of 20 marks.

PRACTICALS

Two exams - terminal and prelim examination of 80 marks each **Total - 160 marks**

1. Long case – Muscle training / Mobility (joint / soft tissue) /Pulmonary Function training (35 marks)
2. Two Short Case: - Based on M.M.T. /Coordination/Posture / Gait/ Funct-reed etc.
(20 X 2 =40 marks)
3. Journal (5 marks)

I.A. to be calculated out of 20 marks.

ELECTROTHERAPY

[300 hrs]

Didactic – 100 hrs + Practical / laboratory – 200 hrs

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

- 1] Describe the Production & Physiological effects, Therapeutic uses, merits, demerits indication & contraindications of various low/medium & high frequency modes
- 2] describe the Physiological effects & therapeutic uses of various therapeutic ions & topical pharmaco -therapeutic agents to be used for the application of iontophoresis & sono/ phono phoresis
- 3] Acquire the skill of Application of the Electro therapy modes on models, for the purpose of Assessment & Treatment.
- 4] acquire an ability to select the appropriate mode as per the tissue specific & area specific application.

Syllabus:

- 1] Low frequency currents –
 - a] Cathodal / Anodal Galvanism, Ionotophoresis – with various ions & pharmacotherapeutic drugs
 - b] Electrical stimulation for re-education – short / long pulse motor points.
 - c] strong surged faradic current under pressure / elevation c] T.N.S. types
 - d] High voltage currents e] Micro –current f] Didynamic currents
- 2] Medium frequency currents – Beat frequency – types Endovac attachment advantage of I.F.T. over low frequency currents.
- 3] Bio-Feedback methods-
- 4] High frequency thermal agents – S.W.D. types continuous / Pulsed – types of electrodes
- 5] Therapeutic Ultra sound pulsed / continuous –
- 6] Actino Therapy a] Radiant heat [I.R.] b] U.V.R. a/b/c types – Test dose, local & general application c] Laser – He/Ne, & I.R. combination.
- 7] Care of wound – application of Therapeutic currents, Ultrasound, U.V.R. & LASER

PRACTICAL

skills of application to be practiced on models –in No-1 to 7 above

TEXT BOOKS

1. Clayton's Electro Therapy
2. Electro therapy Explained – by Low & Read
3. Electro Therapy – by Kahn,
4. Therapeutic Electricity – by Sydeny Litch

REFERENCE BOOKS

Clinical Electro Therapy – by Nelson & Currier

SCHEME OF EXAMINATION

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

PRACTICAL / LAB – 80 MARKS; I.A. – 20 MARKS TOTAL 100 MARKS

THEORY – Model question paper

Section A- M.C.Q.

Q1] based on Single best answer [20 x 1] ----- 20 marks

[To include all MUST KNOW areas]

Section B-S.A.Q.

Q-2] to answer any FIVE out of Six [5 x 3] [must know area] ----- 15 marks

Q-3] to answer any THREE out of Four [3 x 5]

Based on Actino Therapy ----- 15 marks

* Section C-L.A.Q.

Q-4] Should be based on High frequency modes ----- 15 marks

Q-5] should be based on Low / Medium frequency currents ----- 15 marks

OR

Q-6] should be based on Low / Medium frequency currents ----- 15 marks

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

PRACTICAL / LABORATORY

(80 marks)

1. Long Case – On model Motor points / U.V.R. Test Dose. Faradism under pressures (35 marks)

2. Two Short Case - One based on Low or medium Freq current

Second based on high Freq. current / Actinotherapeutict.

(20 x 2 = 40 marks)

3. Journal

(5 marks)

INTERNAL ASSESSMENT

THEORY

Two papers - terminal and prelim examination of 80 marks each **Total - 160 marks**

Section A- M.C.Q.

Q1] based on Single best answer [20 x 1] ----- 20 marks

[To include all MUST KNOW areas]

Section B-S.A.Q.

Q-2] to answer any FIVE out of Six [5 x 3] [must know area] ----- 15 marks

Q-3] to answer any THREE out of Four [3 x 5]

Based on Actino Therapy ----- 15 marks

* Section C-L.A.Q.

Q-4] should be based on High frequency modes ----- 15 marks

Q-5] should be based on Low / Medium frequency currents ----- 15 marks

OR

Q-6] should be based on Low / Medium frequency currents ----- 15 marks

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

I.A. to be calculated out of 20 marks.

PRACTICAL

Two exams - terminal and prelim examination of 80 marks each **Total - 160 marks**

1. Long Case – On model Motor points / U.V.R. Test Dose . Faradism under pressures (35 marks)

2. Two Short Case - One based on Low or medium Freq current

Second based on high Freq. current / Actinotherapy.

(20 x 2 = 40 marks)

3. Journal

(5 marks)

I.A. to be calculated out of 20 marks.

PSYCHOLOGY

(Didactic – 30 Hrs)

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

- 1] be able to define the term Psychology, & its importance in the Health delivery system, & will gain knowledge of Psychological maturation during human development & growth; & alterations during aging process.
- 2] be able to understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality.
- 3] Describe in brief the various treatment modalities commonly used.

Syllabus :-

- 1] Psychiatric History & examination of mental status.
- 2] Classification of Mental disorders
- 3] Schools of thought – Psycho-analytical theory, Behaviourism, gestalt, Stucturalism, Functionalism [In Brief]
- 4] Learning – Role of learning in human life – Conditioning
- 5] Emotions- nature & relationship with autonomic nervous system- Theories of emotions
 - a] James Lange theory, b] Schachter Singer theory, c] Cannan Bard theory
- 6] Memory – types – Forgetting causes
- 7] Attention & perception Nature of attention [in brief] Nature of perception Principles of grouping
- 8] Conflict & Frustration – Types –Common Defense mechanism stress-common reactions to frustrations.
- 9] Abnormal Psychology [in brief] a] Introduction b] deference between normal & abnormal psychology, c] Causes, d] Anxiety disorders – Phobias, Obsessive – compulsive, Hysterical convulsion disorder e] Affective disorders – Depression, mania, Bipolar disorders; f] Psychotic disorders – Types of Schizophrenia

TEXT BOOKS –

- 1] Morgan C.T. & King R.A. Introduction to Psychology – 7th edn [Tata McGraw-Hill publication]
- 2] Munn N.L. Introduction to Psychology [Premium Oxford, I.B.P. publishing co.]
- 3] Clinical Psychology – By Akolkar

SCHEME OF EXAMINATION

Theory 40 marks + I.A. – 10 Marks ----- 50 marks

[There shall be no LAQ in this paper]

Section A-Q-1 MCQs – based on MUST KNOW area ----- 10 marks

Section B-Q-2-SAQ-to answer any FIVE out of Six [5x3] ----- 15 marks

Section C-Q-3-SAQ – to answer any THREE out of Four [5 x 3] ----- 15 marks

INTERNAL ASSESMENT

Two papers – terminal and prelim examination of 40 marks each Total 80 marks

Internal Assessment to be calculated out of 10 marks

SCHEME OF EXAMINATION – IInd B.P.TH

Subject	Theory	IA	Total	Clinical	IA	Total	College
1] Pathology & Microbiology	50 + 30	20	100	----	----	----	----
2] Pharmacology	40	10	50	----	----	----	----
3] Kinesiotherapy	80	20	100	80	20	100	----
4] Electrotherapy	82	20	100	80	20	100	
5] Psychology	40	10	50	----	----	----	----