Syllabus and Examination pattern for Under Graduate Physiotherapy Course Part IV

NOTIFICATION

In exercise of the powers, conferred under section 26 of Krishna Institute of Medical Sciences University, in its meeting of the Board of Management held on 29th November 2008, has been pleased to approve the Bye-law pertaining to Under Graduate Physiotherapy Course Part IV as given in schedule here to Annexed.

The Bye-law as above shall be effective for the students admitted to Under Graduate Physiotherapy Course Part IV from the academic year 2009-10 onwards.

By Order
Registrar

1. This byelaw shall be called Syllabus and Examination pattern for Under Graduate Physiotherapy Course part IV

Physiotherapy Syllabus
IV - B.P.Th.

Subjects Transcript         hours -1438

1) Musculoskeletal Physiotherapy     200hrs
2) Neurology in Physiotherapy      210hrs
3) Cardio- pulmonary Physiotherapy     200hrs
4) Community Physiotherapy      210hrs
5) Principles of Bio-engineering: Theory 15hrs + Practical-15hrs   30hrs
6) Professional issues/Administration/Management/Marketing   40hrs
7) Seminar: 2hrs/ 2 Weeks        40hrs
   (Including case presentation - 15hrs + Literature review - 15 hrs)
8) Supervised clinical practice + Project    508 hrs

Each Clinical assignment shall be of 74 hours at Indoor & 74 hours at the Out door section (including 20 hours of Project) respectively in each of the subjects mentioned at 1, 2 & 3 above. Clinical assignments, Clinical assignment in Community P.T. shall be of 150 hours (Total 7 assignments)

A. During each clinical assignment, the student shall functionally diagnose plan & practice Clinical skills on patients in consultation with the experienced senior staff.

B. Project During each of the 7 assignments, the candidate, shall conduct retrospective case studies on Minimum 5 samples. He/she shall maintain a separate File/journal for each subject & keep all the records of the clinical assignment & ward exam/Seminar etc. in the respective file. However the records of the Project work carried out during the 7 assignments shall be maintained in the file titled as “PROJECT FILE” The candidate shall get the clinical & project work duly verified with the signature from the section In charge at the end each respective assignment.

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Objective:
This course is formulated on the “Problem based” method. At the end of the course, the candidate will:
1. Be able to identify, discuss & analyze, the Musculo Skeletal Dysfunction in terms of Biomechanical, Kinesiology & Biophysical bases & correlate the same with the provisional diagnosis, routine radiological & Electrophysiological investigations & arrive at appropriate Functional diagnosis with clinical reasoning.
2. Be able to plan & Prescribe as well as acquire the skill of executing short & long term Physiotherapy treatment by selecting appropriate modes of Mobilisation /manipulations, Electro Therapy, Therapeutic exercise & appropriate ergonomic advise for the relief of pain, restoration/Maintenance of function, &/ or rehabilitation for maximum functional independence in A.D.L. at home & work place:

Syllabus

Section I:
1. Evaluation, interpretation of investigations & functional diagnosis (ICF) with appropriate clinical reasoning for planning & implementation of management techniques.
3. Documentation.
4. Application of appropriate electro therapeutic modes for relief of acute & chronic pain & swelling; wound healing, re-education etc with clinical reasoning.
5. Application of simple therapeutic modes for muscle strength / joint mobility.
7. Application of various taping methods for support & relief of pain.
8. Posture Correction & Gait Training.
10. Application of appropriate Therapeutic exercise using therapeutic gymnastic tool as and when necessary, for the relief of pain, structural stability, strength/endurance: Functional restoration including gait training/maintenance of functions & / or for the preventive measures.
11. Appropriate Home Program & Ergonomic advise for preventive measures & Functional efficiency at home & work place, Advice to Parents & Care Givers.

Section II:
Physiotherapy management for the following conditions:
1. Manifestations of trauma & diseases of the bones & soft tissues of the musculo skeletal tissue.
2. Fractures of the spine, extremities - classification/ management & complications.
3. Metabolic & hormonal disorders of the bone tissue - Osteoporosis.
4. Peripheral nerve injuries, management/ complications - V.I.C.
5. Deformities of the spine, extremities - congenital malformation - Spina Bifida, meningocele / meningomyelocele, CTEV (Foot Deformities) CDH
6. Re-constructive surgeries in Polio & cerebral palsy.
8. Tumours of the bone.
9. Degenerative / Rheumatoid arthritis.
10. Soft tissue injuries/common soft tissue injuries encountered during sports/Over - use.
11. Amputation - classification - prosthetic management.

Clinical
Evaluation & treatment planning: its presentation & documentation of Minimum two cases each in - 1) # upper Limb (Including hand injury), 2) # lower limb, 3) Soft tissue lesion (any), 4) # spine with/without Neurological condition 5) degenerative arthritis of skeletal joint 6) muskulo - skeletal condition of Hand & foot.

Text Books
1. Cash’s Textbook of Orthopedics & Rheumatology for Physio Therapists- Jaypee
3. Therapeutic exercise - by Kolby & Kisner
4. Therapeutic exercise - by O’ Sullivan
5. Taping Techniques - by Rose Mac Donald

Reference Book
1. Orthopedic Physical therapy - by Donatelli
2. Manual Therapy - by Maitland
3. Neural tissue mobilization - Butler

Scheme of Examination (Practical Examination) Total 80 Marks
1. Long Case: based on the History 10 marks, Evaluation 10 marks, Treatment Plan on Patient 20 marks (Total: 40 marks)
2. Short Case: Simulated (20 Marks)
3. Five spots: spots based on, X-ray (limb, spine), Orthosis, Prosthesis, Metal implants etc 3 minutes each spot and 3 marks per spot (3x5 = 15 Marks)
4. Journal (5 Marks)
NEUROLOGY IN PHYSIOTHERAPY
(TOTAL 210 hrs)
(Adult / Paediatric / Psycho - Somatic & Psychiatric Conditions)
Theory - 70 hrs + *Clinical - 140 hrs (including - Pediatric - Theory - 10hrs+*Clinical 20 hrs)

Objectives:
At the end of the course, the candidate will -
1. Acquire the knowledge of normal neurodevelopment, with specific reference to locomotion
2. Be able to assess, identify & analyze neuro-motor & psychosomatic dysfunction in terms of alteration in the muscle tone, power, coordination, involuntary movements sensations/perception etc, E.M.G. / N.C. Studies & arrive at functional diagnosis with clinical reasoning.
3. Acquire the skill of application of P.N.F. technique on patients.
5. Be able to prescribe appropriate Orthosis / splints & will be able to fabricate temporary protective & functional splints.

Syllabus:
Section I:
Following topics are applicable to all the Neurological conditions (Adult & Pediatric) included in the various clinical subjects of Medical Sciences taught in IInd B. P. Th. course.
2. Assessment of development, Tone, Co-ordination, Psycho-somatic & Locomotor function.
3. Functional Diagnosis of neuromuscular dysfunction
6. Understanding principles of Application of neuro therapeautic skills like PNF, NDT, Carr & Shepherd. Brunstorm & Rood’s
7. Planning short term & Long term goals for all the topics
8) Treatment Programme includes
   a) Application of appropriate Electro-therapeutic modes for relief of pain & functional re-education with clinical reasoning.
   b) Application of skills as P.N.F., Co-ordination & balancing exercise by using techniques based on neuro physiological principles.
   c) Tools used for neuro rehabilitation like vestibular balls, tilt board etc.
   d) Application of transfer & functional re-education exercise, postural exercise & gait training.
   e) Bladder training.
   f) Developing a philosophy for caring.
   g) Prescription for appropriate orthotic devices & fabrication of temporary splints.
   h) Lifting techniques, wheel chair modifications, adaptive devices
   i) Ergonomic advice for prevention / rehabilitation & parents / care givers education about handling of a patient.
Section II:
Physiotherapy management for the following conditions:
1. Hemiplegia, disorders of cerebral circulation & space occupying lesions such as cortical, thalamic & Brain-stem lesions
2. Cranial nerves-emphasis on & 7th & 8th nerves.
3. C.P.
4. Subdural haematoma & birth injuries, hydrocephalus
5. Disease of meanings,
6. Neuro-syphilis, Tabes dorsalis, H.I.V. infection
7. Viral infection of nervous system-encephalitis Herpes, poliomyelitis, viral meningitis.
8. Demyelinating diseases of the nervous System-Multiple sclerosis
11. Disorders of spinal cord-paraplegia, syringomyelia, Transverse myelitis spinal Dysraphysm.
12. Deficiency disorders-Sub-acute combined degeneration of spinal cord.
13. Disorders of peripheral nerves, tumors traumatic, infective infective & metabolic lesions of nerves.
15. Disorders of Autonomic nervous system

Clinical
Evaluation & Treatment planning, it’s presentation & documentation of minimum two cases each in 1) U.M.N. lesion, 2) L.M.N. lesion, 3) Pediatric neuro case.

Text Books
2. Proprioceptive Neuro muscular Facilitation - by Herman Kabat
3. Practical Physical Therapy - Margaret Hollis
4. Therapeutic exercise - by O’Sullivan
5. “Right in the middle” - by Patricia Davis
6. Stroke rehabilitation - by Margaret Johnson

Reference Book
1. Therapeutic exercise - by Basmajian - 5th edn.
2. Physical Rehabilitation - by Krusen
3. Brain’s disorders of Nervous system

Scheme of Examination (Practical Examination) Total 80 Marks
1. Long case: Based on the History 10 marks, Evaluation 10 marks, Treatment plan on Patients 20 marks Total (40 marks)
2. Short case: simulated case (20 marks)
3. Five spots: Spots based on EMG/NC Studies / Orthosis & nuro assessment scale etc 3 minute & 3 marks each (3x5 = 15 marks)
4. Journal (5 marks)
CARDIO-PULMONARY PHYSIOTHERAPY
(Includes general medical and surgical)

(Total-200 hrs) (Theory - 60 hrs & Clinical 140 hrs)

Objectives:
At the end of at the course, the candidate will:

1. Identify, discuss & analyze cardio-vascular & pulmonary dysfunction, based on patho-
   physiological principles, & arrive at the appropriate functional diagnosis.
2. Acquire knowledge of rationale of basic investigative approaches in the medical system &
   surgical intervention regimes related to cardio-vascular & pulmonary impairment.
3. Acquire the skill of evaluation & interpretation of functional capacity, using simple
   exercise tolerance tests, such as 6 minutes walk test, symptom limited test.
4. Be able to select strategies for cure care & prevention; adopt restorative & rehabilitative
   measures for maximum possible functional independence of a patient at home, work
   place & in community.
5. Be able to execute the effective Physio Therapeutic measures (with appropriate clinical
   reasoning) with special emphases to Breathing retraining, nebulization humidification,
   bronchial hygiene, General Mobilisation & Exercise conditioning.
6. Acquire Knowledge of the overview of patients care at the Intensive care area, artificial
   ventilation suctioning, positioning for bronchial hygiene & continuous monitoring of the
   patient at the Intensive care area.
7. Acquire the skill of basic Cardio-pulmonary resuscitation.
8. Be able to execute the effective physiotherapeutic measures with appropriate clinical
   reasoning to improve general surgical and medical condition.

Syllabus:
Section I:
The following topics are applicable to all the adult & pediatric conditions related to
Cardio-respiratory conditions & Peripheral vascular diseases included in the Clinical
subjects of III B.P.Th. program.

1. Assessment of Respiratory & haemo-dynamics, by means of assessment of breath
   sounds, interpretation of dysfunction by, spirometry / Exercise tolerance test /
   assessment of thoracic mobility & breathing pattern.
2. Interpretation of radiological & Biochemical investigations & co-relate the same
   with clinical findings.
3. Functional diagnosis of cardio-respiratory dysfunction & associated Movement
   dysfunction.
4. Planning short / long terms goals with clinical reasoning - documentation of the
   conditions given.
5. Application of appropriate skills for breathing re-training & bronchial Hygiene, as
   preventive (used specifically in preoperative care), restorative & rehabilitative
   measures.
6. Prescription of appropriate therapeutic exercise program for conditioning.
7. Prescription of home program & ergonomic advice/parents education in case of
   Pediatric cases with reference to energy cost.
8. Importance of life style modification in prevention of IHD.
9. Use, application of electro therapeutic modalities for relief of pain, swelling and
   wound healing.
10. Cardio respiratory changes associated with ageing and fitness Programme.

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11. Familiarization with concept of quality of life.

Section II:

Physiotherapy management for the following conditions:

1. Cardiac disorders (Congenital, Acquired, Rheumatic, Rhythm Disturbances IHD, Post Cardio-thoracic surgeries)
2. Pulmonary disorders (Obstructive, Restrictive, Occupational & Pediatric, pulmonary infective.) Precautions with HIV.
4. Diabetes (Wound, Ulcer, Glycemic control with exercise)
5. Obesity
6. Burns
7. General Surgery (Mastectomy & Abdominal surgery)
8. Intensive care unit suctioning, measures to improve Bronchial Hygiene, Positioning for Bronchial Hygiene, Continuous monitoring of the patient, general mobilization.

Clinical

1. Skill to palpate all pulses, rhythm, rate, volume & Heart rate / pulse rate discrepancy.
2. Skill to assess B.P. at various sites, & its Physiological variation, & to assess Ankle Brachial Index.
3. Skill of exercise testing a) 6/12 min walk, b) symptom limited.
4. Interpretation of
   a. Treadmill & Ergo-cycle test findings.
   b. ECG, I.H.D. & Blocks,
   d. Chest x-ray
   e. P.F.T. obstructive/restrictive/reversibility
   f. A.B.G.
   g. R.P.E. Borge’s scale
   h. Quality of life questionnaires
5. Evaluation & treatment planning, presentation & documentation of ONE Case Each in :
   a. Medical Respiratory condition
   b. Pediatric respiratory condition
   c. Thoracic Surgical condition
   d. Cardiac Medical condition
   e. Cardiac Surgical condition
   f. Peripheral vascular disorders
   g. Abdominal surgical condition
   h. Mastectomy / Amputation

Text Books

1. Cash’s Textbook for Physiotherapists in Chest, Heart & Vascular diseases
2. Cash’s text book in General Medicine & Surgical conditions for Physiotherapists
3. Chest Physical therapy & pulmonary rehabilitation by Donna Frownfilter
4. Brompton’s hospital guide

Reference Book

1. Physiotherapy in Cardio - Vascular rehabilitation - Webber
2. Exercises & the Heart - Wenger
3. ECG - by P.J. Mehta

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Scheme of Examination (Practical Examination) Total 80 marks
1. Long case - based on the History 10 marks, Evaluation 10 marks, Treatment Plan on patient 20 marks (Total 40 Marks)
2. Short case - simulated (20 Marks)
3. Five spots - Spots based on ABG/X-ray/ ECG/PFT/RPE/Bruces, protocol etc 3 minutes each spot (3x5 = 15 Marks)
4. Journal (5 Marks)
COMMUNITY PHYSIOTHERAPY

(210 hrs)
HEALTH PROMOTION & CBR: didactic - 20 hrs: clinical ----25hrs
WOMEN’S HEALTH: didactic - 20 hrs: clinical ----25hrs
GERIATRICS HEALTH: didactic - 20 hrs: clinical -----25hrs
OCCUPATIONAL HEALTH [ERGONOMICS]: didactic -10 hrs: clinical -----25hrs
PROJECT: 40 hrs

Objectives:
At the end of the course the candidate will:
A. Be able to describe:
   i. The general concepts about health, disease and physical fitness.
   ii. Physiology of aging process and its influence on physical fitness.
   iii. National policies for the rehabilitation of disabled - role of PT.
   iv. The strategies to access prevalence and incidence of various conditions responsible
      for increasing morbidity in the specific community - role of PT in improving
      morbidity, expected clinical and functional recovery, reasons for non-compliance in
      specific community environment solution for the same.
   v. The evaluation of disability and planning for prevention and rehabilitation.
   vi. CBR in urban and rural set up.
B. Be able to identify with clinical reasoning the prevailing contextual [e.g.
   environmental and psycho-social cultural] factors, causing high risk responsible
   for various dysfunctions and morbidity related to sedentary life style and specific
   community like women, children, aged as well as industrial workers and describe
   planning strategies of interventional policies to combat such problems.
C. Be able to conduct as small project [cross sectional study / survey] to access to the
   prevalence of specific physical health problem and / or morbidity in specific
   community - which may be based at the institutional level or in field.

Syllabus:
1. W.H.O definition of health and disease.
2. Health delivery system - 3 tier.
3. Physical fitness definition and evaluation.
   i. Effect of growth.
   ii. Physical fitness in women-pregnancy, menopause.
   iii. Physiology of aging - neuromusculoskeletal, CVS, metabolic and degenerative.
   iv. Physiological effects of aerobic exercise - clinical reasoning for advocating aerobic
      exercise as preventive measure in obesity & its related conditions / in cardio-
      respiratory conditions / Aging/deconditioning effect after prolonged bed rest /
      Diabetes.
4. Women’s Health - Women in India, Social issue having impact on physical Function, Legal
   rights and benefits. Anatomical & Physiological variations associated with pregnancy &
   menopause. Antenatal, postnatal care, advice on labor positions, pain relief, - Urogenital
   dysfunction, prolapse, incontinence and therapeutic interventions.
5. Geriatrics - Senior citizens in India, NGO’s, Legal rights, benefits. Institutionalized &
   Community dwelling elders. Physiology of ageing. Ms & neuro / Cardio respiratory,
   metabolic, scheme of evaluation & role of PT in Geriatrics.
   i. Definition of International classification of functioning.
   ii. Disability- evaluation, types, prevention.
iii. Rehabilitation - definition, types (institutional, reach out and CBR)
iv. Team work of medical practitioner, PT/OT, AST, P&O, Clinical psychologist, and vocational counselors and social workers. CBR - Role of PT. National policies for rehabilitation of disabled - Role of PT.
v. CBR strategies in
A. Urban area e.g. I. UHC, community centre, clubs, mahila mandals, Social centers. II. Schools, industries, sports centers.
B. Rural area - by using PHC / rural hospital, district hospital / in infrastructure.

6. Occupational health:
   I. Principles of ergonomics
   II. Ability Management -
   III. Environmental stress in the industrial area - accidents due to
       A. Physical agents e.g. heat/cold, light, noise, vibration, UV radiation, ionizing radiation.
       B. Chemical agents- inhalation, local action and ingestion.
       C. Mechanical hazards- overuse/fatigue injuries due to ergonomic alternation and ergonomic evaluation of work place. Mechanical stresses per hierarchy.
          i. Sedentary table work-executive's clerk.
          ii. Inappropriate seating arrangement-vehicle drivers.
          iii. Constant standing- watchman, defense forces, surgeons.
          iv. Over execution in laborers-stress management.
       D. Psychological hazards e.g Role of PT. In industrial set up and stress management relaxation modes. Clinical posting / Visits to UHC, PHC. Project- Survey in any one community in one of the above posting.

Text Books:

1. Physiotherapy in Gynaecological & Obstetrical conditions - by Poldon - Jaypee
3. Therapeutic Exercise - By Kisner
4. Text book of Community Medicine & Community Health - by Bhaskar Rao
5. Geriatrics Physiotherapy - By Andrew Guccione
6. Industrial Therapy - by Glenda Key

Reference Books:

1. Mural K F -Ergonomics: Man in his working environment
2. Exercise Physiology-by Mc’Ardle
3. Musculoskeletal Disorders in work place: Principle & Practice-by Nordin Andersons Pope
4. Indian Social Problem Vol 2 -by G R Madan
5. Disability 2000-RCI
6. Legal Rights of disabled in India-by Gautam Bannerjee
7. ICF -Who Health Organisation 2001 publication
8. Preventive &Social Medicine -by Park
9. Training in the Community for the people with disability -by Hallender Padmini Mendes
10. Disabled Village Children-by David Werner

Scheme of Examination (Practical Examination) Total 80 Marks
1. Long Case -Women’s Health /Geriatric/Industrial Health /Health Promotion (Marks 40)
2. Short Case -simulated based on community health problem (Marks 20)
3. Project Presentations and Viva (Marks 15)
4. Journal (Marks 5)

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At the end of the course, the candidate shall
1. Acquire knowledge about biomechanical principles, application of variety of aids & appliances used for ambulation, protection & prevention
2. Acquire in brief knowledge about various material used for splints/Orthosis & prosthesis—selection criteria
3. Acquire the skill of fabrication of simple splints made of low cost material.

**Syllabus**

1. Classification of Aids & appliances-
2. Biomechanical principles in designing of appliances & assessment Procedures for static & dynamic alignment of the following—Aids & appliances /Splints /Orthosis -for spine—upper & lower limb Prostheses— for Upper limbs , Upper limbs,  
3. Project—Temporary splints –to fabricate ONE splint each - [to use P.O.P, aluminum strips /sheets /wires rubber bands, rexin, Orfit etc] –
   i. Cock up (dorsal/volar)
   ii. Outrigger,
   iii. Opponence splint
   iv. Anterior and posterior guard splints for gait training,
   v. Foot drop splint
   vi. Facial splint
   vii. Mallet Finger Splint,
   viii. C bar for 1st web space of hand
   ix. C bar for 1st web space of hand

**Scheme of Examination-**

**[College Examination]**

- THEORY -20 MARKS + PROJECT -30 MARKS =50 MARKS
- Professional Issues / Administration / Management / Marketing   (40hrs)

**Section- I**

**Professional Issues (Including Ethics)**

**Objectives:**

This course is aimed to enable the candidate to acquire the knowledge of ethical code of professional practice, as well as its moral & legal aspects; & role of W.H.O. W.C.T.

**Contents:**

1. Concepts of morality, Ethics & Legality—rules of professional conduct & their implication—The need of Council Act for Physiotherapy
2. Constitution & Functions of the Indian association of Physical therapy (I.A.P.T.) & its various branches
3. Functioning of the World Confederation of Physical therapy (W.C.P.T.) & its various branches
4. Role of W.H.O. W.C.P.T.
Section-II
Administration/Management & Marketing

Objectives
At the end of the course the student will acquire the knowledge of the basics in Managerial & Management skills, & use of Information technology in professional Practice contents-

1. Management studies related to local health care organization management & structure, planning delivery with quality assurance & funding of service delivery - information technology -Time management -career development in Physiotherapy.
2. Administration-principles-based on the Goal & functions -at large hospital set up / domiciliary services/ private clinic /academic.
3. Methods of maintaining records-
4. Budget-planning -
5. Performance analysis--physical structure / reporting system [man power / status /functions / quantity & quality of services/turn over-cost benefit revenue contribution.

Scheme of Examination-**[College Examination]

Time-2 Hrs.

Theory
Section-I- 25 Marks + Section-II-25 Marks =50 Marks

All the following subjects shall follow the same patterns of examination

1. Musculoskeletal Sciences
2. Physiotherapy in Neurosciences
3. General Medical & Surgical Physiotherapy
4. Community Physiotherapy & Rehabilitation

Theory-Pattern of Paper setting 80 marks

Section-A: Q-1 M.C.Q. Single best answer 20 X 1 20 marks
Section-B: Q-2 S.A.Q. Answer any FIVE out of Six 5 x 3 15 marks
Q-3 answer any THREE out of Four 3 x5 15 marks
#Section-C: Q-4 L.A.Q. 15 marks
Q-5 15marks

OR
Q-6 15 marks

#- In the subject “General Medical & Surgical Physiotherapy”-
L.A.Q - Q-4 in THEORY paper should be based on “P.T. in Cardiovascular OR Pulmonary condition”.

Clinical - Pattern given after each subject

Internal Assessment
Theory 20 marks
Clinical 20 marks

KRISHNA INSTITUTE OF MEDICAL SCIENCES UNIVERSITY, KARAD.
Theory
All the following subjects shall follow the same patterns of examination
1. Musculoskeletal Sciences
2. Physiotherapy in Neurosciences
3. General Medical & Surgical Physiotherapy
4. Community Physiotherapy & Rehabilitation

One terminal & one preliminary examination of 80 marks each
[Section A (20 marks), Section B (30 marks), Section C (30 marks)]
Based on pattern of University Examination
160 marks to be converted into 20 & send to University

Clinical/Practical - Internal Assessment
One terminal & one preliminary examination of 80 marks each
Based on pattern of University Examination
160 marks to be converted into 20 & send to University

Journal marks are in the treatment plan section of long case
1. Musculoskeletal Sciences
2. Physiotherapy in Neurosciences
3. General Medical & Surgical Physiotherapy
   1. Long case - based on the History 10 marks, Evaluation 10 marks, Treatment Plan on patient 25 marks (Total 45 Marks)
   2. Short case - simulated (20 Marks)
   3. Spots - (3x5 = 15 Marks)
4. Community Physiotherapy & Rehabilitation
   1. Long Case - Women’s Health / Geriatric / Industrial Health / Health Promotion (Marks 40)
   2. Short Case - simulated based on community health problem (Marks 20)
   3. Project Presentation / Viva / Short case (Marks 20)

Internal assessment marks should be calculated out of 20 marks in theory and 20 marks in clinical/practical

Scheme of Examination - IVth B.P.TH

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Grade College exam
Principals of Bioengineering
Professional Issues
Section A
Administration & Management
Section B

#GRADE A+:75% & above, A:66<75%, B+:55<66%, B:50%, C:<50% [FFF]
Internship: (26 WEEKS) 1014 hrs
Placement Indoor Outdoor Total Hrs.

1. Musculo-Skeletal (Surgical/Medical) 6 weeks
   - Traumatology / Rheumatology & cold cases 78hrs 78 hrs
   - Burns & Plastic Surgery 39hrs 39 hrs

2. Neuro-Sciences-Surgical/Medical/Psycho-somatic 6 weeks
   a. Adult 39hrs 78hrs
   b. Paediatric 39hrs 39hrs
   c. Psychiatry/psycho-somatic 39hrs

3. Cardio-Respiratory (Surgical/Medical) 6 weeks
   a. Surgical/Medical 39hrs 39hrs
   b. Intensive Care (Surgical/Medical/Trauma) 39hrs 39hrs
   c. Obstetrics & Gynecology 39hrs 39hrs
   # Residency- recommended 39hrs

4. Community/physiotherapy & Rehab 6 weeks 78hrs 78hrs

5. Project: (20 Cases) 2 weeks 39hrs 78hrs

(Includes Project on evidence based investigation measures or Clinical trials/Prospective case studies having sample size of minimum 20 Subjects.)

Evaluation of the Internship

1. Attitude-
The student shall put up not less than 90% attendance during EACH assignment. Student’s performance shall be graded by the respective clinic section In-charge at the end of each assignment. The candidates shall Repeat the particular assignment if the performance is found unsatisfactory [Grade-C or D]

2. Project-
Submitted by the candidate will be dully verified & a viva shall be conducted on the same at the end of the Internship& a grade shall be granted. Internship Completion certificate shall be issued to the candidate ONLY after the satisfactory performance in project Viva as well as in the “Attitude” during EACH clinical assignment.