

बि.पि. कोइराला मेमोरियल क्यान्सर अस्पताल
प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (एलाइड हेल्थ) समुह, फिजियोथेरापी उपसमुह, अधिकृत सातौं तह,
फिजियोथेरापी टेक्नोलोजिष्ट पदको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
एवं परीक्षा योजना

कुल पूर्णाङ्क : १२०

१. प्रथम चरण : – लिखित परीक्षा					पूर्णाङ्क :- १००	
पत्र / विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या X अङ्क	समय
General Subject and Technical Subject	१००	४०	वस्तुगत	बहुवैकल्पिक प्रश्न (MCQs)	१०० प्रश्न x १ अङ्क	१ घण्टा ३० मिनेट

२. द्वितीय चरण : – अन्तर्वार्ता

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	२०	मौखिक

द्रष्टव्य :

१. यो परीक्षा योजनालाई प्रथम चरण (लिखित परीक्षा) र द्वितीय चरण (अन्तर्वार्ता) गरी दुई चरणमा विभाजन गरिएको छ ।
२. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
३. लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाईबाट देहाय बमोजिम प्रश्नहरु सोधिनेछ ।

खण्ड	अङ्कभार	वस्तुगत प्रश्न संख्या
A	१०	१० प्रश्न X १ अङ्क = १०
B	१०	१० प्रश्न X १ अङ्क = १०

४. वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरुको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
५. यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरु परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
६. प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
७. पाठ्यक्रम लागू मिति :- २०७४/११/२९

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पत्र/विषय : **General Subject and Technical Subject**

General Subject

Section (A) – 10 Marks

1. B.P.Koirala Memorial Cancer Hospital, Related Legislations and General Health Issues

- 1.1. B.P.Koirala Memorial Cancer Hospital : History, organizational structure, functions, roles, services, problems and challenges
- 1.2. National Health Policy
- 1.3. B.P.Koirala Memorial Cancer Hospital related act and regulations
- 1.4. Professional council related acts and regulations
- 1.5. Professional ethics

Technical Subject

Section (B) – 90 Marks

1. Human Anatomy and Physiology

1.1 Human Anatomy

- 1.1.1 Thorax: Ribs, Vertebrae, Intercostal space, intercostal nerve, pleural, reflection, outline of respiratory system as a whole. Mediastina surface of lungs, Broncho-pulmonary segments, Mediastinum
- 1.1.2 Heart & Coronary vessels
- 1.1.3 Vertebral column & its applied anatomy
- 1.1.4 Abdomen & Pelvis: Lumbar vertebral, Sacrum, Bony Pelvis, Ant Abdominal wall, Inguinal canal & hernia, Testes, Scrotum
- 1.1.5 General outline of digestive system, Liver, gall bladder, kidney, uretger, Suprarenal glad, urinary bladder, prostate, urethra, male and female reproductive organs, joints and pelvis
- 1.1.6 Superior Extremity: Bones in detail Branchial Plexus including applied anatomy, Main muscle groups and their action, joints and their applied anatomy, Axillary lymphnodes and lymphatic drainage of mammary gland venous drainage of upper limb
- 1.1.7 Inferior Extremity: Bones in detail, lumber and sacral plexus, main nervesd and muscles. Arches of foot and its applied anatomy, Arterial anastomosis around knee joint venos drainage, Inguinallymphnodes joints & their applied anatomy
- 1.1.8 Brain & Spinal Cord: Connection & main functions of each part, internal capsule, and blood supply
- 1.1.9 Surface Anatomy: Bony landmarks and surface anatomy of important structures

1.2 Human Physiology

- 1.2.1 Tissues and their functions
- 1.2.2 Cardio Vascular System
- 1.2.3 Neuromuscular
- 1.2.4 Nerve system
- 1.2.5 Digestive system
- 1.2.6 Genito-Urinary system
- 1.2.7 Endocrine system

2. Pharmacology, Pathology, Microbiology and Biochemistry

2.1 Pharmacology

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- 2.1.1 Drug allergy
- 2.1.2 Drug toxicity
- 2.1.3 Methods of administration
- 2.1.4 Hormones
- 2.1.5 Vitamins
- 2.1.6 Drugs acting on neuromuscular junction and muscles
- 2.1.7 Drugs acting on cardio-respiratory system
- 2.1.8 Drugs acting on CNS, PNS, ANS
- 2.1.9 Chemotherapeutic agents
- 2.2 **Pathology**
 - 2.2.1 Inflammation/ tissue repair/ cell repair
 - 2.2.2 Infection/tumors-etioloogy spreads and types
 - 2.2.3 Blood: Anemia, rheumatic and coronary heart diseases
 - 2.2.4 Respiratory system: Pneumonia, asthma, bronchitis, bronchiectasis, emphysema
 - 2.2.5 Bones and joints disease: auto immune disease, different arthritis, osteomyelitis
 - 2.2.6 Skin: leprosy
 - 2.2.7 Polio, myopathies, CNS infections and psoriasis
- 2.3 **Microbiology**
 - 2.3.1 Sterilization
 - 2.3.2 Bacteriology/virology
 - 2.3.3 Immunity
 - 2.3.4 Allergy and hypersensitivity
- 2.4 **Biochemistry**
 - 2.4.1 Metabolism of carbohydrates, vitamins, fats, proteins
- 3. **Bio-mechanics and Kinesiology**
 - 3.1 Definition of kinesiology and Bio-Mechanics
 - 3.2 General Principles, force, axis and planes, center of gravity, levers, classification of force system
 - 3.3 Origin of human movement and its significance
 - 3.4 Forms of human movements, their characteristics and factors affecting them
 - 3.5 Analysis of movement
 - 3.6 Bio-Mechanics of spine, lower extremity & upper extremity
 - 3.7 Gait analysis-gait deviations
- 4. **Physiotherapy in Surgical Conditions**
 - 4.1 Introduction: Brief review of surgical conditions and treatment and role of physiotherapy in the rehabilitation of paring with various diseases including
 - 4.1.1 Neurosurgery
 - 4.1.2 Thoracic surgery
 - 4.1.3 Head and Neck surgery
 - 4.1.4 Gynecological malignancies
 - 4.1.5 Urological surgery
 - 4.1.6 Malignancies of bone
 - 4.1.7 GI surgery
 - 4.1.8 Breast surgery

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- 4.1.9 Plastic Surgery
 - 4.1.10 Amputations – Pre & Post-operative physiotherapy
 - 4.1.11 Fractures, dislocations and soft tissues injuries – upper extremity, lower extremity and spine.
 - 4.1.12 Deformities – Congenital and acquired deformities of upper extremity, lower extremity and spine
 - 4.1.13 Inflammatory conditions of joints and bones
 - 4.1.14 Hand injuries
 - 4.2 Supportive and corrective appliance in the rehabilitation
 - 4.3 Adoptive devices in the rehabilitations of surgical cases
 - 4.4 Activities of daily living testing and training in A.D.L.
 - 4.5 Post operation physiotherapy
5. **Rehabilitation in Musculoskeletal and Sports:** (Clinical condition and different exercises regimes, therapeutic modalities and equipments, prosthetics and orthotics used for the management of the condition)
- 5.1 Muscle contusion/strain/ ligament sprain/tear/weakness
 - 5.2 Pelvic floor dysfunction
 - 5.3 Tendinopathy, tendon tear/ rupture/ tendonosis
 - 5.4 Joint derangement/dysfunction, fracture, dislocation, subluxation
 - 5.5 Degenerative joint diseases, osteoporosis, osteopenia
 - 5.6 Amputation
 - 5.7 Congenital malformation
 - 5.8 Sports injuries
 - 5.9 Mechanical spinal abnormalities
 - 5.10 Inflammatory/infectious conditions
 - 5.11 Nerve compression/ radiculopathy/ peripheral nerve injuries
6. **Rehabilitation in Pediatrics:** (Clinical condition and different exercises regimes, therapeutic modalities and equipments, prosthetics and orthotics used for the management of the condition)
- 6.1 Congenital and acquired musculoskeletal disorders
 - 6.2 Congenital and acquired neurological disorders
 - 6.3 Congenital and acquired cardio-pulmonary disorders
 - 6.4 Developmental disorder, learning disorders, burns, vitamins deficiency
7. **Rehabilitation in Geriatrics** (Clinical condition and different exercises regimes, therapeutic modalities and equipments, prosthetics and orthotics used for the management of the condition)
- 7.1 Musculoskeletal disorder
 - 7.2 Cardiopulmonary disorder
 - 7.3 Neurological disorders
 - 7.4 Burns, nutritional disorders
 - 7.5 Dementia, depression
 - 7.6 Occupational therapy

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8. **Rehabilitation in Multisystem** (Clinical condition and different exercises regimes, therapeutic modalities and equipments, prosthetics and orthotics used for the management of the condition)
 - 8.1 HIV/AIDS, autoimmune disease, hemophilia
 - 8.2 Fibromyalgia, chronic pain
 - 8.3 Obesity, burns
 - 8.4 Wounds/ ulcers
 - 8.5 Skin condition like dermatitis, psoriasis

9. **Ethics and Management**
 - 9.1 Professional ethics and legal issues
 - 9.1.1 The implications of and confirmation to the rules of professional conduct
 - 9.1.2 Legal responsibility for their actions in the professional context and understanding liability and obligations in case of medico-legal action
 - 9.1.3 A wider knowledge of ethics relating to current social and medical policy in the provision of health care
 - 9.1.4 National and international professional bodies: as a professional association and education body- Difference between scientific association (Professional body) and statutory body
 - 9.1.5 The role of international health agencies such as WHO, WFOT and WCPT
 - 9.2 Management
 - 9.2.1 Definition – Branches of management – Principle of health sector management
 - 9.2.2 General principles of management
 - 9.2.3 Personnel management – Basic concepts and theories
 - 9.2.4 Financial issues including budget and income generation
 - 9.2.5 Organization of a department – Planning, space manpower materials, basic requirements
 - 9.2.6 Resource and quality management – Planning with change and coping with change

10. **Clinical Practice**
 - 10.1 Data collection
 - 10.2 Tests/measurements
 - 10.3 Data interpretation
 - 10.4 Prognosis
 - 10.5 Goal setting and care planning
 - 10.6 Implementation
 - 10.7 Education/communication with patients and their family members
 - 10.8 Intervention progression

The questions distribution for this paper/subject shall be as follows:

Section	Marks	Multiple Choice Questions
		No. of Questions × Mark
A	10	10 Questions × 1Mark =10 Marks
B	90	90 Questions × 1Mark =90 Marks