

**बी.पी. कोइराला मेमोरियल क्यान्सर अस्पताल**  
**प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (चिकित्सक) समुह, मेडिकल अंकोलोजी (पेडियाट्रिक) उपसमुह, अधिकृत नवौं**  
**तह, रजिष्ट्रार पदको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम**

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

**प्रथम चरण :-** लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

**द्वितीय चरण :-** अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ३०

**परीक्षा योजना (Examination Scheme)**

**प्रथम चरण (First Phase) : लिखित परीक्षा**

Paper	Subject	Full Marks	Pass Marks	No. Questions & Weightage	Time Allowed
I	General Subject	100	40	10 × 5 = 50 (Short answer) 5 × 10 = 50 (Long answer)	3.00 hrs
II	Technical Subject	100	40	6 × 10 = 60 (Long answer) 2 × 20 = 40 (Problem Solving)	3.00 hrs

**द्वितीय चरण (Second Phase)**

Subject	Full Marks	Examination
Interview	30	Oral

**द्रष्टव्य :**

- यो परीक्षा योजनालाई प्रथम चरण (लिखित परीक्षा) र द्वितीय चरण (अन्तर्वार्ता) गरी दुई चरणमा विभाजन गरिएको छ ।
- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- परीक्षामा सोधिने प्रश्नसंख्या, अङ्क र अङ्कभार यथासम्भव सम्बन्धित पत्र/विषयमा तोकिए अनुसार हुनेछ ।
- विषयगत प्रश्नमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रममा जे सुकै लेखिएको भएतापनि पाठ्यक्रममा परेका ऐन, नियमहरू, परीक्षाको मिति भन्दा ३ महिना अगाडी (संशोधन भएका वा संशोधित भई हटाईएका वा थप गरी संशोधित भई कायम रहेका) लाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति :- २०७८/०२/२२

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**Paper I: General Subject**

**Section (A): 40% Marks (4×5 marks, 2×10 marks)**

**1. Administration and Management**

- 1.1. Public Administration: concept, scope, functions and challenges
- 1.2. Management: concept, scope, functions, principles, and its practices
- 1.3. Contemporary management issues and challenges
- 1.4. Hospital Management : concept, scope, function, principle and its practices
- 1.5. Human resource management: concept, functions and different aspects
- 1.6. Basic managerial skills: coordination and public relation, communication and counselling, problem solving and decision making, leadership, team building, rapport building, planning, organizing, monitoring and evaluation
- 1.7. Emerging management concepts and their application in the Nepalese Public Management: Time management, Resource management (human, financial and physical), Technology management, Performance management, Stress management, Conflict management, Risk management and Participative management
- 1.8. Planning: concept, principles, nature, types, instrument and steps
- 1.9. Motivation, appreciative inquiry and social responsibility
- 1.10. Positive attitude and self-development
- 1.11. Group dynamic and organizational behavior
- 1.12. Grievance redressal and settlement
- 1.13. Financial Management: Concept, Approaches, Budget Formulation and Implementation, Auditing and topics related to Fiscal administration

**Section (B): 40% Marks (4×5 marks, 2×10 marks)**

**2. General Health Issues**

- 2.1. Present Constitution of Nepal (health and welfare issues)
- 2.2. National Health Policy
- 2.3. Health sector in current periodical plan
- 2.4. Health Service Act, 2053 and Health Service Regulation, 2055
- 2.5. Professional council related acts and regulations
- 2.6. Act Regulating Narcotics
- 2.7. NMC and National Health Agencies
- 2.8. Indigenous and traditional faith healing and health practices
- 2.9. International health agencies: Role and responsibilities of WHO, UNICEF, UNFPA and interagency relationships
- 2.10. Health and Human Right including Women's Right, Children's Right, Professional's Right, Client Right and Informed consent
- 2.11. Gender issues and health
- 2.12. Urbanization and health impacts
- 2.13. National health training system
- 2.14. Supervision, types and its usage in Health Sector

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- 2.15. Monitoring and Evaluation System in Health
- 2.16. Health Management Information System
- 2.17. Health economics - basic terms, health insurance and financing in Health Care
- 2.18. Federal governance and decentralization in health
- 2.19. Evidence Based Medicine / Critical Appraisal of Scientific Literature
- 2.20. Principles of Research Methodology and Scientific paper writing/publication
- 2.21. Professional and medical ethics
- 2.22. Informed Consent and Medico legal Issues
- 2.23. Medical Audit and Quality Assurance
- 2.24. Information technology and Tele medicine
- 2.25. Drug act and regulation
- 2.26. Rational use of drugs, national drug policy and importance of essential drug list
- 2.27. Ethics, Integrity and Accountability of health professionals
- 2.28. Private sector health institution its regulation and management
- 2.29. Health institution development and management
- 2.30. Patient safety & Breaking Bad News
- 2.31. Cancer Registry: Hospital and Community Based Cancer Registry
- 2.32. Preventive Oncology
  - 2.32.1. Epidemiology
  - 2.32.2. Primary prevention (Cancer Awareness, Cancer Education, Vaccination)
  - 2.32.3. Secondary Prevention (Screening, Screening Methods)
- 2.33. Multidisciplinary Approach in Cancer Management

**Section (C): 20% Marks (2×5 marks, 1×10 marks)**

**3. Organizational Knowledge**

- 3.1. B.P.Koirala Memorial Cancer Hospital : History, organizational structure, functions, roles, services, possibilities, problems and challenges
- 3.2. Service provided by B.P.Koirala Memorial Cancer Hospital-service types, quality, technology, citizen engagement in service design
- 3.3. Relations between Government and other national and international related organizations
- 3.4. Health manpower recruitment and development in B.P.Koirala Memorial Cancer Hospital
- 3.5. B.P.Koirala Memorial Cancer Hospital related act and regulations

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**Paper II : Technical Subject**  
**Section (A) – 50 % Marks**

- 1. Growth and Development:**
  - 1.1 Normal Growth and Development
  - 1.2 Disorders of Growth and Development
- 2. Nutrition:**
  - 2.1 Normal nutrition in infancy and childhood
  - 2.2 Common nutritional disorders in childhood
  - 2.3 Nutrition supplementation programs
- 3. Concept of Preventive pediatrics**
- 4. Pharmacology Chemotherapeutic Drugs**
  - 4.1 Classification
  - 4.2 Plant alkaloids
  - 4.3 Alkylating agents
  - 4.4 Antimetabolites
  - 4.5 Anthracyclines, Antitumor antibiotics
  - 4.6 Topo-isomerase inhibitors, proteasome inhibitors
  - 4.7 Corticosteroids
  - 4.8 Pharmacology of different medicines
- 5. Cancer of various Systems : Solid Tumors**
  - 5.1 Bone and soft tissue sarcomas
  - 5.2 Respiratory system
  - 5.3 GI Malignancies
  - 5.4 Genitourinary Malignancies
  - 5.5 CNS Tumors
  - 5.6 Hepatobiliary and pancreatic cancers
  - 5.7 Cardiovascular malignancies
  - 5.8 Cancer of unknown primary
  - 5.9 Cancer of breast
  - 5.10 Cancer of skin
  - 5.11 Cancer of endocrine system
  - 5.12 Mesotheliomas
  - 5.13 Gynaecologic cancers
  - 5.14 Malignant melanomas
- 6. Haematological malignancies**
  - 6.1 Myelodysplastic Syndrome
  - 6.2 Acute and chronic leukemias
  - 6.3 Hodgkin,s and Non-Hodgkins Lymphomas
  - 6.4 Plasma cell Dyscrasias
  - 6.5 Myeloproliferative disorders

**Section (B) – 50 % Marks**

**7. Childhood cancers and their management**

- 7.1 CNS Tumors
- 7.2 Bone and soft tissue sarcomas
- 7.3 PNET tumors
- 7.4 Lymphoma and leukemias
- 7.5 Nephroblastoma
- 7.6 Hepatoblastoma
- 7.7 Retinoblastomas
- 7.8 Palliative care in children

**8. Manifestation of complications of cancer and cancer treatment in various systems and their management**

- 8.1 Haematological complications
- 8.2 Renal complications
- 8.3 GI related complications
- 8.4 Infection and sepsis
- 8.5 Para- Neoplastic syndrome
- 8.6 Cardiovascular complications
- 8.7 Respiratory Complications
- 8.8 CNS complications
- 8.9 Metabolic Complications
- 8.10 Neuromuscular complications
- 8.11 Bone and joint complications
- 8.12 Skin and Appendages
- 8.13 Fertility issues
- 8.14 Psychosocial issues

**9. Stem Cell Transplant**

- 9.1 Indications and principles of stem cell transplant
- 9.2 Sources of stem cells preparative regimen
- 9.3 Procedure, complications, prognosis

**10. Cancer Diagnostics**

- 10.1 Radiological diagnostics
- 10.2 Molecular and cytogenetics
- 10.3 Cytological and Histopathological diagnostics
- 10.4 Biochemical Diagnostics
- 10.5 Tumor markers, IHC (Immunohistochemistry), Flowcytometry
- 10.6 Nuclear and Radionuclear imaging
- 10.7 Interventional Radiology
- 10.8 Basics of Radiation Oncology
- 10.9 Basics of Surgical Oncology

## **11. Recent Advances in cancer management**

- 11.1 Genetics and disease
- 11.2 Investigation of the molecular basic of disease
- 11.3 Modern molecular methods in human disease
- 11.4 Types of genetic disease
- 11.5 Genetic factors in common diseases
- 11.6 Essentials of Molecular Biology
- 11.7 Molecular Biology of cancer
- 11.8 Newer approaches in cancer; Immunotherapy, Biotherapy, Genetherapy

## **12. Palliative Care**

- 12.1 Introduction and basic concept including definition
- 12.2 Guidelines for palliative care
- 12.3 Different pharmacologic & non-pharmacologic methods
- 12.4 Pain assessment and management, WHO ladder, balanced use of opiods
- 12.5 Common symptom management
- 12.6 Palliative anticancer medicine
- 12.7 Ethical issues in Palliative care
- 12.8 Psychosocial issues
- 12.9 End of life care
- 12.10 Supportive care and quality of life
- 12.11 Rehabilitation of cancer patient
- 12.12 Palliative radiotherapy
- 12.13 Palliative chemotherapy
- 12.14 Home care
- 12.15 Hospice care