

बी.पी. कोइराला मेमोरियल क्यान्सर अस्पताल  
प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (चिकित्सक) समुह, मेडिकल अंकोलोजी (जनरल मेडिकल ) उपसमुह, अधिकृत  
नवौ 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. **Pharmacology and critical care medicine**
  - 1.1 Classification of Chemotherapeutic Drugs
  - 1.2 Plant alkaloids
  - 1.3 Alkylating agents
  - 1.4 Antimetabolites
  - 1.5 Anthracyclines, Antitumor antibiotics
  - 1.6 Topo-isomerase inhibitors, proteosome inhibitors
  - 1.7 Corticosteroids
  - 1.8 Principles of pharmacology therapy
  - 1.9 Pharmacology of different medicines
  - 1.10 Principles of critical care medicine
  - 1.11 Oxygen delivery
  - 1.12 Major manifestations, monitoring and management of critical illness
  - 1.13 Nutritional factors in health and disease
2. **Infection**
  - 2.1 Basic of infection
  - 2.2 Major manifestations of infections
  - 2.3 Principles of management of infection, including different antimicrobial agent and prevention of infection
  - 2.4 Diseases due to different organism like virus, bacteria, protozoa, helminthes
3. **Cancer of various Systems : Solid Tumors**
  - 3.1 Bone and soft tissue sarcomas
  - 3.2 Respiratory system
  - 3.3 GI Malignancies
  - 3.4 Genitourinary Malignancies
  - 3.5 CNS Tumors
  - 3.6 Hepatobiliary and pancreatic cancers
  - 3.7 Cardiovascular malignancies
  - 3.8 Cancer of unknown primary
  - 3.9 Cancer of breast
  - 3.10 Cancer of skin
  - 3.11 Cancer of endocrine system
  - 3.12 Mesotheliomas
  - 3.13 Gynaecologic cancers
  - 3.14 Malignant melanomas
4. **Haematological malignancies**
  - 4.1 Myelodysplastic Syndrome
  - 4.2 Acute and chronic leukemias
  - 4.3 Hodgkin,s and Non-Hodgkins Lymphomas
  - 4.4 Plasma cell Dyscrasias
  - 4.5 Myeloproliferative disorders

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5. **Manifestation of complications of cancer and cancer treatment in various systems and their management**
  - 5.1 Haematological complications
  - 5.2 Renal complications
  - 5.3 GI related complications
  - 5.4 Infection and sepsis
  - 5.5 Para- Neoplastic syndrome
  - 5.6 Cardiovascular complications
  - 5.7 Respiratory Complications
  - 5.8 CNS complications
  - 5.9 Metabolic Complications
  - 5.10 Neuromuscular complications
  - 5.11 Bone and joint complications
  - 5.12 Skin and Appendages
  - 5.13 Fertility issues
  - 5.14 Psychosocial issues
6. **Stem Cell Transplant**
  - 6.1 Indications and principles of stem cell transplant
  - 6.2 Sources of stem cells preparative regimen
  - 6.3 Procedure, complications, prognosis

### **Section (B) – 50 % Marks**

7. **Cancer Diagnostics**
  - 7.1 Radiological diagnostics
  - 7.2 Molecular and cytogenetics
  - 7.3 Cytological and Histopathological diagnostics
  - 7.4 Biochemical Diagnostics
  - 7.5 Tumor markers, IHC (Immunohistochemistry), Flowcytometry
  - 7.6 Nuclear and Radionuclear imaging
  - 7.7 Interventional Radiology
  - 7.8 Basics of Radiation Oncology
  - 7.9 Basics of Surgical Oncology
8. **Recent Advances in cancer management**
  - 8.1 Genetics and disease
  - 8.2 Investigation of the molecular basic of disease
  - 8.3 Modern molecular methods in human disease
  - 8.4 Types of genetic disease
  - 8.5 Genetic factors in common diseases
  - 8.6 Essentials of Molecular Biology
  - 8.7 Molecular Biology of cancer
  - 8.8 Newer approaches in cancer; Immunotherapy, Biotherapy, Genetherapy
  - 8.9 Basics of high dose chemotherapy and newer modalities of treatment, principles of radiotherapy, the use of various radioisotopes
9. **Palliative Care**
  - 9.1 Introduction and basic concept including definition
  - 9.2 Guidelines for palliative care
  - 9.3 Different pharmacologic & non-pharmacologic methods

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- 9.4 Pain assessment and management, WHO ladder, balanced use of opioids
- 9.5 Common symptom management
- 9.6 Palliative anticancer medicine
- 9.7 Ethical issues in Palliative care
- 9.8 Psychosocial issues
- 9.9 End of life care
- 9.10 Supportive care and quality of life
- 9.11 Rehabilitation of cancer patient
- 9.12 Palliative radiotherapy
- 9.13 Palliative chemotherapy
- 9.14 Home care
- 9.15 Hospice care
10. **Non-communicable diseases and cancer related conditions**
  - 10.1 Epidemiology and control of cancers
  - 10.2 HIV and cancer
  - 10.3 TB and cancer
  - 10.4 Infections and cancer
  - 10.5 Diabetes and cancer
  - 10.6 Management of Anaemia in cancer
  - 10.7 Diet and nutrition in cancer patients
11. **Geriatrics and Skin system and disorders**
  - 11.1 Normal ageing
  - 11.2 Major manifestations of disease in frail older people
  - 11.3 Functional anatomy and physiology of the skin
  - 11.4 Major manifestations and investigations of skin disease
  - 11.5 Skin diseases
  - 11.6 The skin and systemic disease
12. **Nuclear medicine**
  - 12.1 Basic knowledge of use of nuclear medicine in diagnosis of both oncologic and non-oncological hematological disorders
13. **General Surgical Principles**
  - 13.1 Shock
  - 13.2 Surgical infection
  - 13.3 Fluid and electrolyte imbalance
  - 13.4 Preoperative and post operative patient care
  - 13.5 TNM classification of cancers
14. TNM and other commonly used cancer staging systems
15. Common pediatric malignancy - Diagnosis, staging and treatment