

बी.पी. कोइराला मेमोरियल क्यान्सर अस्पताल
प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (चिकित्सक) समुह, सर्जिकल अंकोलोजी (थोरासिक सर्जरी) 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 :- २०७९/०७/२४

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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. **Applied Anatomy and Developmental Anatomy**
 - 1.1 Chest wall Diaphragm, Pleura, Lungs, Mediastinum, Oesophagus, Heart, Pericardium, Great Vessel and its branches
2. **Applied Physiology**
 - 2.1 Respiration, gas exchange, Pulmonary function tests, ventilation, Cardiac cycle, Cardiac output, heart sounds and murmurs, regional circulation, Extracorporeal Circulation Hypothermia, cardiac metabolism, Acid base balance, Fluid Electrolyte Balance, Gastro Oesophageal reflux
3. **Applied Pathology**
 - 3.1 Thoracic injuries, Chest wall tumours, mediastinal tumours
 - 3.2 Pleural diseases, disorders of Trachea, Bronchus & lung /Pulmonary suppuration, pulmonary tuberculosis, benign & malignant lesions of lungs, benign and malignant lesions of Oesophagus, strictures & motility disorders of Oesophagus, Diaphragmatic hernia
4. **Applied Microbiology**
 - 4.1 Pulmonary infections, infective endocarditis; infections following cardiac & thoracic surgery
5. **Pharmacology:** Knowledge of medicines used in this specialty
6. **Basics of Thoracic Surgery**
 - 6.1 History of General Thoracic Surgery
 - 6.2 Evolution of Thoracic Surgery at BPKMCH
 - 6.3 Thoracic Imaging (CXR, CT, MRI, Radionucleotide study and PET)
 - 6.4 Thoracic endoscopies – Bronchoscopy (Rigid and Fibre optic)
 - 6.5 Esophagogastroduodenoscopy- Endoscopic ultrasound
 - 6.6 Ultrasound of chest/ lungs - Endobronchial ultrasound
 - 6.7 Mediastinoscopy
 - 6.8 Thoracotomy and Sternotomy (Open and close)
 - 6.9 Thoracoscopy
 - 6.10 Preoperative assessment of the thoracic surgical patient
 - 6.11 Pulmonary physiologic testing
 - 6.12 Anesthesia for General Thoracic Surgery
 - 6.13 Perioperative pain management
 - 6.14 Thoracic incisions
 - 6.15 Principles of postoperative care
 - 6.16 Postoperative complications
 - 6.17 Scenario of Lung cancer in Nepal
 - 6.18 Video assisted Thoracic Surgery - Principle, Indications, Techniques and Complications
 - 6.19 Thoracic surgical evaluation
 - 6.20 Physiology of respiration
 - 6.21 Concept of VATS

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6.22 Concept of common thoracic surgical problem and their approaches in:

6.22.1 Hemothorax

6.22.2 Empyema thoracis

6.22.3 Pneumothorax

6.23 General concept of pleurodesis

7. General Surgical Principles

7.1 Shock

7.2 Surgical infection

7.3 Fluid and electrolyte imbalance

7.4 Preoperative and post operative patient care

7.5 TNM classification of cancers

8. Cancer Diagnostics

8.1 Role of radiological interventions

8.2 Molecular and cytogenetics

8.3 Tumor markers, IHC (Immunohistochemistry), Flowcytometry

8.4 Nuclear and radionuclear imaging

8.5 Interventional radiology

8.6 Basics of radiation oncology

8.7 Basics of surgical oncology

8.8 Basics of medical oncology

Section (B) – 50 % Marks

9. Malignant Diseases/Lung Cancer/ Bronchitis

9.1 Lung Cancer - Types, signs and symptoms, investigations, staging, treatment modalities and Rehabilitation

9.2 Evaluation and management of Solitary Pulmonary Nodule

9.3 Other rare benign and malignant lung and airway tumors

9.4 Evaluation and management of secondaries in lung

9.5 Evaluation and management of mediastinal lesion – benign and malignant

9.6 The assessment and management of lung cancer, including the scientific basis of staging systems and techniques used in the determination of stage and fitness for surgery

9.7 Role of surgical treatment in the multidisciplinary management of lung cancer and other intrathoracic malignant diseases, including an appreciation of the principles of other treatment modalities and their outcomes

10. Neoplasm of esophagus

10.1 Neoplasm of esophagus – benign & malignant:

10.2 Benign Tumor and Cysts of Esophagus

10.3 Esophageal Cancer

10.4 Esophagogastric Junction tumor

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- 10.5 Adjuvant and Neoadjuvant Therapy for Ca Esophagus
- 10.6 Pre-operative evaluation and management in esophageal surgery
- 10.7 Techniques of Esophageal Resection, Reconstruction and Complications of Esophagectomy
- 10.8 Post-operative management
- 10.9 Evidence based practice and recent advances related to various esophageal conditions and their management
- 11. Disorders of the Pleura**
 - 11.1 The assessment and management of patients with pleural disease; including pneumothorax and empyema, and including both VATS and open strategies
- 12. Disorders of the Chest Wall**
 - 12.1 The assessment and management of patients with chest wall abnormalities, infections and tumors
- 13. Disorders of the Diaphragm**
 - 13.1 The assessment and management of patients' disorders of the diaphragm, including trauma to the diaphragm
- 14. Emphysema and Bullae**
 - 14.1 The assessment and management of patients with emphysematous and bullous lung disease; including surgical management if appropriate and utilizing both VATS and open strategies
- 15. Disorders of the Pericardium**
 - 15.1 The assessment and management of patients with disorders of the pericardium and pericardial cavity; including surgical management if appropriate and utilising both VATS and open strategies
- 16. Disorders of the Mediastinum**
 - 16.1 The assessment and management of patients with mediastinal tumours and masses; including surgical management if appropriate and utilising both VATS and open strategies
- 17. Recent advances in cancer management**
 - 17.1 Essentials of molecular biology
 - 17.2 Molecular biology of cancer
 - 17.3 Newer approaches in cancer; Immunotherapy, Biotherapy, Genetherapy