

बी.पी. कोइराला मेमोरियल क्यान्सर अस्पताल
प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (चिकित्सक) समुह, रेडियोडाईग्नोसिस तथा इमेजिङ्ग उपसमूह, अधिकृत एघारौं
तह, कन्सल्टेन्ट 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 ।
- माथी परीक्षा योजनामा उल्लिखित प्रथम चरणको लिखित परीक्षामा प्रथम चरणको विषयवस्तु स्वास्थ्य सेवाका सबै समूह / उपसमूहका लागि एउटै हुनेछ । तर द्वितीय पत्रको पाठ्यक्रमको विषयवस्तु सम्बन्धित समूह/ उपसमूह अनुरूप फरक फरक हुनेछ ।
- पाठ्यक्रम लागू मिति :- २०७९/०९/०२

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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) – 60 % Marks

1. **Anatomy and Physiology**
 - 1.1 Cell and Tissues (Epithelial, Connective, Skeletal, Muscular and Nervous)
 - 1.2 Respiratory system
 - 1.3 Gastrointestinal system
 - 1.4 Hepatobiliary System
 - 1.5 Genito-urinary system
 - 1.6 Skeleton System
 - 1.7 Nervous System
 - 1.8 Skin and the organs of special sense (eye, ear, nose and tongue)
 - 1.9 Cross sectional anatomy
2. **Radiation Physics**
 - 2.1 Production and properties of X-ray
 - 2.2 Properties of X-ray film, film processing
 - 2.3 X-ray absorption on the radiographic image
 - 2.4 Principle of Diagnostic ultrasound
 - 2.5 Principle of CT
 - 2.6 Principle of MRI
 - 2.7 Radiation Hazards and its effects
3. **Radiology**
 - 3.1 Cardiovascular
 - 3.1.1 Normal heart and pericardium
 - 3.1.2 Pulmonary circulation
 - 3.2 Respiratory
 - 3.2.1 Normal Chest
 - 3.2.2 Tumors of the lung
 - 3.2.3 Inflammatory diseases of the lung
 - 3.2.4 Remaining diseases of lung, pleura and soft tissue and bony thoracic cage of chest
 - 3.3 Gastrointestinal tract and abdomen
 - 3.3.1 Malignant Diseases of Pharynx, esophagus, stomach and duodenum
 - 3.3.2 Malignant Diseases of small bowel and large bowel
 - 3.3.3 Malignant Diseases of biliary tract
 - 3.3.4 Malignant Diseases of Liver, spleen & pancreas
 - 3.4 Urogenital Tracts
 - 3.4.1 Malignant Cystic diseases of the kidney
 - 3.4.2 Tumours of the kidney and ureter
 - 3.4.3 Renal calculi and Nephrocalcinosis
 - 3.4.4 Malignant Diseases of Bladder and prostate
 - 3.4.5 Malignant Gynaecological diseases
 - 3.5 Malignant Diseases related to ENT, Eye and soft tissues
 - 3.6 Central Nervous System
 - 3.6.1 Normal and abnormal skull
 - 3.6.2 Malignant Diseases of brain and spine
 - 3.6.3 Malignant Brain and spinal tumor
 - 3.7 Bones and Joints

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- 3.7.1 Malignant Diseases of bone and joints
- 3.7.2 Tumors and tumors like conditions of bone
- 3.8 Endocrine and metabolic diseases
 - 3.8.1 Ultrasound imaging of the whole body
 - 3.8.2 CT Imaging of the whole body
 - 3.8.3 MRI Imaging of the whole body

Section (B) – 40 % Marks

4. Radiological Procedures

4.1 First Aids and Emergency Care

4.1.1 Introduction to Haemorrhage, primary management of haemorrhage

4.2 Contrast Media

4.2.1 Introduction, definition, types and uses of contrast media

4.2.2 Properties of contrast media

4.2.3 Adverse effects of contrast media and their management

4.3 Biliary Tract and Pancreas

Definition, indications, contraindications, equipment required contrast media, preparation of the patient, technique / procedure, filming, post procedure care for following investigations:

4.3.1 Intravenous cholelithography (IVC)

4.3.2 Percutaneous transhepatic cholangiography (PTC)

4.3.3 T-tube cholangiography

4.4 Urinary Tract

Definition, indications, contraindications, equipment required, contrast media, preparation of the patient, technique/procedure, filming, post procedure care for following investigations:

4.4.1 Intravenous urography (IVU)

4.4.2 Modification of IVU and additional techniques

4.4.3 Percutaneous renal puncture (PcRP)

4.4.4 Percutaneous nephrostomy (PCN)

4.4.5 Retrograde pyelography (RGP)

4.4.6 Micturating cysto-urethrography

4.5 Reproductive System

Definition, indications, contraindications, equipment required contrast media, preparation of the patient, technique/procedure, filming, post procedure care for :

4.5.1 Hysterosalpingography

4.6 Sinography

Definition, indications, contraindications, equipment required, contrast media, preparation of the patient, technique / procedure, filming, post procedure care for;

4.6.1 Sinography

4.7 Interventional procedures :

USG guided FNAC, CT guided FNAC/ Biopsy.