

बि.पि. कोइराला मेमोरियल क्यान्सर अस्पताल
प्राविधिक (स्वास्थ्य) सेवा, मेडिकल (एलाइड हेल्थ) समुह, फार्मसी उपसमुह, अधिकृत सातौं तह, फार्मसी
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 सम्भन्नु 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. B.P.Koirala Memorial Cancer Hospital related act and regulations
- 1.3. National Health Policy
- 1.4. National Drug Policy
- 1.5. Health Service Act, 2053 and Health Service Regulation, 2055
- 1.6. Professional council related acts and regulations
- 1.7. Professional ethics
- 1.8. Role and Responsibility of Nepal Pharmacy Council

Technical Subject

Section (B) – 90 Marks

1. Pharmaceutics

- 1.1 Introduction, scope and area of Pharmaceutics
- 1.2 Pharmaceutical development and pharmaceutical institution in Nepal
- 1.3 Introduction to pharmacopoeias and other compendia; pharmacopoeial standards and their needs; importance and application of pharmacopoeial specification
- 1.4 Introduction to Good Manufacturing Practice, Good Laboratory Practice and Good Pharmacy Practice
- 1.5 Quality Assurance and WHO guidelines and ISO 9000
- 1.6 Prescription, proper handling of prescription, incompatibilities
- 1.7 Pharmaceutical dosage form: Fast, Immediate, Sustained/controlled release including novel drug delivery system. e.g. mucosal drug delivery systems
- 1.8 Pharmaceutical additives
- 1.9 Physical pharmacy; application of thermodynamics; rate and order of reaction; accelerated stability testing and shelf-life of drugs; pH; buffered and isotonic solution; solution of electrolytes; micromeritics; colloidal system; theology
- 1.10 Concept and studies of Bio-availability and Bioequivalence
- 1.11 Alternative systems of medicine: Ayurveda, Homoeopathy and Unani

2. Microbiology

- 2.1 Scope of microbiology with special reference to pharmaceutical sciences, basic principles of sterility and pyrogen testing, fundamental of Immunology, Testing of vaccines used in Extended Programme of Immunization
- 2.2 Microbial contamination test in pharmaceuticals, food, water and environment; classification of pathogenic microorganisms
- 2.3 Basic principles of Biotechnology
- 2.4 Methodology of sterilization

3. Pharmaceutical analysis

- 3.1 Fundamental titrimetric analysis: acid-base, oxidation-reduction, non-aqueous, complexometric and potentiometric titrations

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- 3.2 Spectroscopic methods of analysis, Absorption, Visible, IR, UV spectroscopy, Fluorimetry, Polarimetry, Atomic absorption and Emission spectroscopy
 - 3.3 Gravimetric analytical methods and their applications
 - 3.4 Separation techniques: Column, Paper, Thin layer, Ion exchange, Gel and Gas chromatography; High Performance Liquid Chromatography, High Performance Thin Layer Chromatography, Electrophoreses
 - 3.5 Extraction procedures and role of partition coefficient
 - 3.6 Principles and application of microbiological assay of antibiotics and vitamins.
 - 3.7 Good Laboratory Practices, validation, references standards
 - 3.8 Statistical analysis, sampling technique and use of statistics
4. **Pharmacognosy**
- 4.1 Definition, history & scope of Pharmacognosy
 - 4.2 Medicinal herbs of Nepal: Origin, distribution, cultivation, drying, pulverization, storage, and quality control
 - 4.3 Plant analysis, types of plant constituents and physico-chemical standards
 - 4.4 Plant based drugs in modern medicine
 - 4.5 Extraction process and isolation of active ingredients, pilot plant processing
5. **Pharmacology**
- 5.1 Mechanism and action of drugs, their safety, uses and mode of administration
 - 5.2 Pharmacokinetics, pharmacodynamics and pharmacological evaluation of drugs
 - 5.3 Poisoning: control and treatment
 - 5.4 Adverse drug reaction and drug interactions
6. **Medicinal Chemistry**
- 6.1 Characterization of organic compounds of pharmaceutical interest and specific reactions
 - 6.2 Synthesis of important pharmaceuticals, their pharmacological action and anti-microbial activities
7. **Pharmaceutical Care & Drug Supply Management**
- 7.1 Comprehensive knowledge of clinical and hospital pharmacy; patient counseling and dosage adjustment in elderly, impaired liver and kidney; use of drug in neonates, children, pregnancy and lactation
 - 7.2 Logistics management (selection, procurement, storage and distribution)
 - 7.3 Drug Financing Schemes (cost recovery, sharing and insurance)
 - 7.4 Concept of Essential Drugs, National Formulary, Hospital Formulary and Drug & Therapeutics Committee
 - 7.5 Standard Treatment Schedules and rational use of drugs
 - 7.6 Role of Pharmacist in hospital and community
8. **Chemotherapeutic agents - MOA, indications, side effects, drug interaction**
9. **Related Legislations**
- 9.1 औषधि ऐन, २०३५
 - 9.2 औषधि दर्ता नियमावली, २०३८
 - 9.3 औषधि परामर्श परिषद् र औषधि सल्लाहकार समिति गठन नियमावली, २०३७

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- 9.4 औषधि जांचबूझ तथा निरीक्षण नियमावली, २०४०
9.5 औषधि स्तर नियमावली, २०४३
9.6 औषधि उत्पादन संहिता, २०४१
9.7 लागु औषध (नियन्त्रण) ऐन, २०३३

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