

**नेपाल स्टक एक्सचेञ्ज लिमिटेड**  
**प्राविधिक सेवा, तह ८, सहायक आई. टी. प्रबन्धक अधिकृत पदको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको**  
**पाठ्यक्रम**  
**एवं परीक्षा योजना**

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छ :

**१. प्रथम चरण : – लिखित परीक्षा**

**पूर्णाङ्क :- २००**

पत्र	विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या X अङ्क	समय
प्रथम	Management and Related Legislations	१००	४०	वस्तुगत	छोटो उत्तर लामो उत्तर	८ प्रश्न X ५ अङ्क ६ प्रश्न X १० अङ्क	३ घण्टा
द्वितीय	Information Communication Technology	१००	४०	विषयगत	लामो उत्तर	६ प्रश्न X १० अङ्क	३ घण्टा
					समस्या समाधान	२ प्रश्न X २० अङ्क	

**२. द्वितीय चरण : – अन्तर्वार्ता**

**पूर्णाङ्क :- ३०**

विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	३०	-	मौखिक

**द्रष्टव्य :**

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी वा दुवै हुन सक्नेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाईबाट प्रश्नहरु सोधिनेछ ।
- विषयगत प्रश्नमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरु हुनेछन् । परिक्षार्थीले प्रत्येक खण्डका प्रश्नहरुको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- 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 सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागू मिति :-

**प्रथम पत्र :- Management and Related Legislations**

**Section (A) – Management – (50 Marks)**

**1. Management**

- 1.1 Public Administration : concept, scope, objective, importance, problem and prospect of public administration
- 1.2 Management: Concept, principles, and scope of management
- 1.3 Functions of Management : Planning, Decision Making, Organizing, Coordination, Leadership, Motivation and Communication
- 1.4 Human resource management: concept, functions and different aspects
- 1.5 Manager : types, basic qualities, and roles, and managerial ethics
- 1.6 Emerging challenges for management
- 1.7 Participative management
- 1.8 Time management
- 1.9 Conflict management
- 1.10 Strategic management
- 1.11 Change management
- 1.12 Organization development
- 1.13 Quality management
- 1.14 Financial management
- 1.15 Public Enterprises Management
- 1.16 Knowledge Management

**2. Capital market**

- 2.1 Structure of capital market in Nepal: NEPSE, SEBON, CDS and Clearing Ltd, Merchant Banker and Securities Businessperson
- 2.2 Fund Flow Mechanism Through Capital Market
- 2.3 Bond and Share Valuation
- 2.4 Primary Market and Secondary Market
- 2.5 Indices calculation
- 2.6 Tradable Financial Instruments

**Section (B) – Related Legislations – (50 Marks)**

**3. Laws and Regulations**

- 3.1 Securities Related Act, 2063
- 3.2 Securities Board Regulation, 2064
- 3.3 Stock Exchange Operation Regulation, 2064

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पाठ्यक्रम

- 3.4 Securities Businessperson (Stock Broker, Dealer & Market Maker) Regulation, 2064
- 3.5 Securities Businessperson (Merchant Banker) Regulation, 2064
- 3.6 Securities Registration and Issue Regulation, 2073
- 3.7 Securities' Central Depository Services Regulation, 2067
- 3.8 CDS Bylaws, 2068
- 3.9 Company Act, 2063
- 3.10 Electronic Transaction Act, 2063 and Electronic Transaction Regulation, 2064
- 3.11 Telecommunication Act, 2053 (1997) and Telecommunication Regulation, 2064
- 3.12 Asset (Money) Laundering Prevention Act, 2008
- 3.13 Government Securities Transaction Bylaws of NEPSE, 2062

**4. Policies:**

- 4.1 Information Technology Policy, 2010
- 4.2 National Communication Policy, 2049
- 4.3 Telecommunication Policy, 2060

**5. National and International Organization**

- 5.1 National Information Technology Center (NITC), Government Integrated Data Center (GIDC), IT Council, Nepal Telecom Authority (NTA)
- 5.2 Internet Engineering Task Force (IETF), W3C, Internet Society, ITU
- 5.3 WTO, SATFA, BIMSTEC (IT Related Provision)
- 5.4 SDG (Sustainable Development Goals)
- 5.5 World Summit on the Information Society (WSIS)
- 5.6 World Bank Group, International Monetary Fund (IMF), International Organization of Securities Commissions (IOSCO), World Federation of Exchanges (WFE), South Asian Federation of Exchanges (SAFE).

**6. Standards**

- 6.1 ISO, CMMI, Six Sigma Standards
- 6.2 ICAO (Smart Card), Europay, MasterCard, and Visa (EMV)
- 6.3 WWW Standards and Regulation
- 6.4 Internet Standards and Regulation

यस पत्र/विषयको पाठ्यक्रमबाट यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

Section	अङ्कभार	प्रश्न संख्या	
		छोटो उत्तर	लामो उत्तर
<b>A</b>	५०	४ प्रश्न X ५ अङ्क = २०	३ प्रश्न X १० अङ्क = ३०
<b>B</b>	५०	४ प्रश्न X ५ अङ्क = २०	३ प्रश्न X १० अङ्क = ३०

## द्वितीय पत्र :- Information Communication Technology

- 1. Introduction Information Technology (ICT)**
  - 1.1 Emerging trends in ICT
  - 1.2 ICT and National Development
  - 1.3 Social and Cultural Impact of ICT
  - 1.4 Mobile computing
  - 1.5 Cloud Services and grid computing
  - 1.6 Global information superhighway
  
- 2. Computer Architecture and Organization**
  - 2.1 Instruction Set Architecture
  - 2.2 CPU Design and Architecture
  - 2.3 Memory Hierarchy
  - 2.4 Input - Output System
  - 2.5 CISC vs. RISC
  
- 3. Operating System**
  - 3.1 Components of Operating System
  - 3.2 Processes
  - 3.3 IPC and Deadlock
  - 3.4 Memory management
  - 3.5 Input - output files
  - 3.6 Scheduling
  - 3.7 Distributed Operating System
  - 3.8 Security issues
  
- 4. Information System**
  - 4.1 Design of information system building blocks
  - 4.2 Management system development
  - 4.3 Management Information System
  - 4.4 Decision Support System
  - 4.5 ERP, CRM and SRM
  - 4.6 Cloud Services
  
- 5. Software Engineering**
  - 5.1 System Development Process Model: Waterfall, Prototype, Spiral, RAD, JAD, RUP, Agile
  - 5.2 Requirement analysis and requirement engineering
  - 5.3 System Design and Modeling
  - 5.4 Software Testing
  - 5.5 Software quality assurance, validation & verification
  - 5.6 Software quality standards: ISO, SEI, CASE Tools

## **6. Project Management**

- 6.1 Concept of software project
- 6.2 Project Planning
- 6.3 Time scheduling: GANTT, CPM/PERT network
- 6.4 Cost Estimation: Expert Judgment, COCOMO
- 6.5 Budgeting: Cost Benefit Analysis, ROI, NPV, Payback Period, IRR
- 6.6 Risk Management
- 6.7 Monitoring and Control: Earn value Analysis
- 6.8 Configuration Management

## **7. Computer Network**

- 7.1 Network Fundamentals
- 7.2 OSI Reference Model
- 7.3 Network Protocols
- 7.4 TCP/IP Services
- 7.5 Network Infrastructure
- 7.6 VAN and Remote access
- 7.7 Internet and WWW
- 7.8 Disaster recovery
- 7.9 Distributed system
- 7.10 Privacy and security issue

## **8. Database Management System**

- 8.1 Database Model
- 8.2 Structured Query Language
- 8.3 Normalization and Functional Dependency
- 8.4 Database Design
- 8.5 Transaction management and concurrency control
- 8.6 Query processing and optimization
- 8.7 Data Mining and data warehouse
- 8.8 Business Intelligence
- 8.9 Big data

## **9. ICT Strategy**

- 9.1 Strategic use of ICT
- 9.2 Potter five force model
- 9.3 Formulation of long term objectives
- 9.4 Strategic analysis and choices
- 9.5 SWOT analysis
- 9.6 Core competencies
- 9.7 Strategy control and continuous improvement
- 9.8 Strategy implementation

**10. e-Commerce, m-Commerce and Online trading Technology**

- 10.1 Introduction to e-Commerce, m-Commerce and Online Trading
- 10.2 Business model of e-commerce and m-Commerce
- 10.3 Services Delivery model on e-Commerce and m-Commerce
- 10.4 Electronic Data Interchange
- 10.5 Business Application of e-Commerce and m-Commerce
- 10.6 Electronic payment System
- 10.7 Security Issue in e-Commerce, m-Commerce and Online Trading
- 10.8 PKI and Digital Signature
- 10.9 Encryption and decryption methods