

## सामाजिक सुरक्षा कोष

सेवा:विविध, समूह:कम्प्युटरइन्जिनियरिङ तह : १०, पद: निर्देशकको खुला र आन्तरिक  
प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

### परीक्षा योजना (Examination Scheme)

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

प्रथम चरण :- लिखित परीक्षा	पूर्णाङ्क :- २००
द्वितीय चरण :- (क) मामिला अध्ययन र प्रस्तुति	पूर्णाङ्क :- २०
(ख) अन्तर्वार्ता	पूर्णाङ्क :- ३०

प्रथम चरण :- लिखित परीक्षा

पत्र	विषय	खण्ड	प्रश्न संख्या	अंकभार	परीक्षाप्रणाली	समय	पूर्णाङ्क	उत्तीर्णङ्क
प्रथम	सार्वजनिक प्रशासन र व्यवस्थापन		१०	१०×५=५०	छोटो छोटो उत्तर	३ घण्टा	५०	४०
			५	५×१०=५०	लामो उत्तर		५०	
द्वितीय	सेवा सम्बन्धी प्राविधिक विषय		४	४×५=२०	छोटो उत्तर	३ घण्टा	१००	४०
			८	८×१०=८०	लामो उत्तर			

२. द्वितीय चरण :

विषय	पूर्णाङ्क	परीक्षाप्रणाली	समय
मामिला अध्ययन र प्रस्तुति	२०	कुनै एउटा समसामयिक मामिलाको अध्ययन गरी प्रस्तुतीको लागि तयारी गर्न ४५ मिनेट प्रदान गरिनेछ र प्रस्तुतीकरणको लागि प्रत्येक उम्मेदवारलाई छुट्टाछुट्टै ३० मिनेटको समय उपलब्ध गराइने छ ।	
व्यक्तिगत अन्तर्वार्ता	३०	मौखिक	-

१. लिखित परीक्षामा यथासम्भव पाठ्यक्रमका सबै एकाई बाट प्रश्नहरू सोधिनेछ ।
२. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
३. यथा सम्भव प्रश्नहरू नेपालको सन्दर्भमा सोधिने छन् ।
४. द्वितीय पत्रको विषयगत प्रश्नका लागि तोकिएका १० अङ्कका प्रश्नहरूको हकमा १० अंकको एउटा लामो प्रश्न वा एउटा प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
५. यस पाठ्यक्रममा जेसुकै लेखिएको भएतापनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मितिभन्दा ३ महिनाअगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई ) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
६. प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ ।
७. पाठ्यक्रम लागू मिति - २०७६।०२।१५

**Paper- 1<sup>st</sup>: Public Administration and Management**

**Section- A: Public Administration (2x10=20 Marks)**

**1. Public Administration**

- 1.1 Various aspects of the Constitution of Nepal**
- 1.2 Federal, provincial and local governance**
- 1.3 Interrelationship between bureaucracy and politics**
- 1.4 Democracy, human rights, rule of law, inclusion and proportionate representation**
- 1.5 People responsive and result-oriented administration**
- 1.6 Right to information and transparency**
- 1.7 Evolution of social security system in Nepal and the present status of social security in Nepal**

**Section- B: Management (2x10=20 Marks)**

**2. Management**

- 2.1 Principles of Management**
- 2.2 Functions, problems and challenges of management**
- 2.3 Crisis management, Change management, Resource management, Technology management, Risk management, Performance management, Reward management**
- 2.4 Decision Making Process**
- 2.5 Self Management**
- 2.6 Relation building with stakeholders**

**Section- C: Human Resource Management (3x10=30 Marks)**

**3. Human Resource Management**

- 3.1 Concept and major functions of human resource management and HRM practice in the Nepalese public sector**
- 3.2 Strategic human resource management**
- 3.3 Job analysis: introduction, types and functions**
- 3.4 Human resource planning**
- 3.5 Performance appraisal system: principles and practice**
- 3.6 Employee motivation**
- 3.7 By-laws of Personnel Administration of Social Security Fund**

**Section (D)= Contemporary Issues and International Perspectives on Social Security**

**(3x10)= 30 Marks**

१. Contemporary Issues: Globalization, Poverty, Sustainable Development Goals, Gender and Social justice, Food Safety and Food Security, Unemployment, Brain and Muscle Drain, Human Trafficking, Drug Trafficking, Cyber Crime, Transnational Threats, Terrorism
२. Contribution of ISSA, UNESCAP, UNICEF and ILO in promoting Social Security.
३. Social Security System in Nepal: Current Status of Social Security System in Nepal, Social Security related laws and procedures- Constitution of Nepal (Directive Principles and State Policies), Contribution based Social Security Fund Act and regulation, Bonus Act and regulation, Labor Act and regulation, Electronic Transaction Act, Social Security Fund Operation Procedure, Employer and worker registration procedure, Social Security Fund Employee Administration regulation.

द्वितीयपत्र :- सेवा सम्बन्धी प्राविधिक विषय

**1. Introduction [Marks: 5]**

- 1.1 General concept of Information Technology (IT) planning.
- 1.2 Importance of IT in national development.
- 1.3 Social and cultural aspects of IT.
- 1.4 Global information superhighway
- 1.5 Social Security and IT

**2. Software Engineering [Marks: 10]**

- 2.1 System development life cycle- Joint Application Development (JAD), Rapid Application Development (RAD), Waterfall, Spiral.
- 2.2 Software project management.
- 2.3 Requirement analysis.
- 2.4 System, data and process modeling.
- 2.5 Software testing.
- 2.6 Software quality assurance.
- 2.7 Software quality standards: International Organization for Standardization (ISO), Software Engineering Institute (SEI), Computer-Aided Software Engineering (CASE) Tools.
- 2.8 Software cost estimation.

### **3. Computer Architecture & Organization**

**[Marks: 5]**

- 3.1 Instruction set architecture.
- 3.2 CPU design and architecture.
- 3.3 Memory hierarchy.
- 3.4 Input / Output system.
- 3.5 Complex Instruction Set Computer (CISC) vs. Reduced Instruction Set Computer (RISC)

### **4. Operating Systems**

**[Marks: 5]**

- 4.1 Components of the Operating Systems.
- 4.2 Processes.
- 4.3 IPC and deadlocks.
- 4.4 Memory management.
- 4.5 Input / Output and files.
- 4.6 Scheduling.
- 4.7 Different types of Operating Systems (OS) (DOS, UNIX, LINUX, WINDOWS, IOS).
- 4.8 Distributed Operating System.
- 4.9 Security issues.

### **5. Information Systems**

**[Marks: 10]**

- 5.1 Information systems fundamentals.
- 5.2 Design of information systems building blocks.
- 5.3 Management system development.
- 5.4 Management Information System (MIS).
- 5.5 Decision support system.
- 5.6 Enterprise resource planning (ERP), Customer relationship management (CRM) and Supplier relationship management (SRM)
- 5.7 Ethical & social impact of IS

### **6. Computer Networks**

**[Marks: 10]**

- 6.1 Network fundamentals.
- 6.2 Open Systems Interconnection (OSI) model.
- 6.3 Network protocols.
- 6.4 Transmission Control Protocol/Internet Protocol (TCP / IP) services (Domain Name System (DNS), Simple Network Time Protocol (SNTP), File Transfer Protocol (FTP), Dynamic Host Configuration Protocol (DHCP), etc)
- 6.5 Network infrastructures (Local-Area Network (LAN) and Wide-Area Network (WAN) including IEEE 802. standards).
- 6.6 Virtual Area Network (VAN) and remote access.
- 6.7 Internet and World Wide Web (WWW).
- 6.8 Distributed system.

6.9 Privacy and security issues.

## **7. Database Management System**

**[Marks: 10]**

- 7.1 Database model.
- 7.2 Structured Query Language (SQL).
- 7.3 Functional dependency.
- 7.4 Database design.
- 7.5 Transaction management and concurrency control.
- 7.6 Query processing and optimization.
- 7.7 Normalization.
- 7.8 DBMS architecture.
- 7.9 Basic concept of major DBMS products (Oracle, DB2, Sybase, MSSQL server, etc)
- 7.10 Data mining and Data warehousing.

## **8. IT Strategy**

**[Marks: 10]**

- 8.1 Strategic use of IT.
- 8.2 Porter 5 Forces model.
- 8.3 Formulating long-term objectives;
  - 8.3.1 Long-term objectives.
  - 8.3.2 Generic strategies.
  - 8.3.3 The value disciplines.
  - 8.3.4 Grand strategies.
- 8.4 Strategic analysis and choices.
- 8.5 Value chain analysis.
- 8.6 SWOT analysis.
- 8.7 Core competencies.
- 8.8 Strategy control and continuous improvement.
- 8.9 Strategy implementation.

## **9.E-Commerce Technology**

**[Marks: 5]**

- 9.1 Introduction to E-Commerce.
- 9.2 Business models of E-Commerce.
- 9.3 B2B E-Commerce and Electronic data interchange (EDI).
- 9.4 Business applications of E-Commerce.
- 9.5 Electronic payment system.
- 9.6 Security issues of E-Commerce.
- 9.7 Public key infrastructure (PKI) and digital signature
- 9.8 Encryption and decryption methods.

## **10. E-Government**

**[Marks: 10]**

- 10.1 E-Governance model

- 10.2 Managing E-Governance
- 10.3 E-Governance readiness
- 10.4 E-Governance infrastructure development
- 10.5 Security for E-Governance
- 10.6 E-Governance strategy
- 10.7 Managing public data
- 10.8 Emerging issues of E-Governance
- 10.9 Implementing E-Governance
  - 10.9.1 E-Governance system life cycle and project assessment
  - 10.9.2 Analysis of current reality
  - 10.9.3 Design of new E-Governance system
  - 10.9.4 E-Governance risk assessment and mitigation
  - 10.9.5 E-Governance system construction implementation and beyond
- 10.10 Nepalese E-Governance initiative and E-Governance master plan of Nepal
- 10.11 Government enterprise architecture and Government` portal
- 10.12 Government integrated data center
- 10.13 Disaster recovery center
- 10.14 Focal agencies for E-Government (NITC, Dept. of Information and Broadcasting, Office of Controller of Certificate, etc)

## **11. Project Management**

**[Marks: 10]**

- 11.1 Requirement engineering.
- 11.2 PERT / CPM network.
- 11.3 Investment analysis and breakeven analysis.
- 11.4 Time value of money.
- 11.5 Financial analysis.
- 11.6 Software estimation.
- 11.7 Configuration management.
- 11.8 Team building approach.
- 11.9 Issue tracking and management.
- 11.10 Verification and validation.
- 11.11 Business process reengineering.

## **12. IT in Nepal**

**[Marks: 10]**

- 12.1 History of IT in Nepal
- 12.2 National Information and Communication Technology Policy,2015 (ICT Policy, 2015)
- 12.3 Electronic Transaction Act, 2063 B.S.
- 12.4 Copyright Act, 2059 B.S.
- 12.5 Nepali Unicode, Nepali Fonts

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