

# सामाजिक सुरक्षा कोष

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

### परीक्षा योजना (Examination Scheme)

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

- प्रथम चरण :- लिखित परीक्षा
  - पूर्णाङ्क :- 200
- द्वितीय चरण :- (क) मामिला अध्ययन र प्रस्तुति
  - पूर्णाङ्क :- 20
- (ख) अन्तर्विष्टि
  - पूर्णाङ्क :- 20

## प्रथम चरण :- लिखित परीक्षा

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<th>पव</th>
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<th>खण्ड</th>
<th>प्रश्न संख्या</th>
<th>अंकमार</th>
<th>परीक्षाप्रणाली</th>
<th>समय</th>
<th>पूर्णाङ्क</th>
<th>उत्तीरणाङ्क</th>
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<td>१०</td>
<td>१०×१०=१००</td>
<td>लामो उत्तर</td>
<td>३ घण्टा</td>
<td>१००</td>
<td>४०</td>
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<td>सेवा सम्बन्धी प्राथमिक विषय</td>
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<td>४×४=२०</td>
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<td>३ घण्टा</td>
<td>१००</td>
<td>४०</td>
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<td></td>
<td></td>
<td>८</td>
<td>८×१०=८०</td>
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## २. द्वितीय चरण :

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<th>परीक्षा प्रणाली</th>
<th>समय</th>
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<td>मामिला अध्ययन र प्रस्तुति</td>
<td>२०</td>
<td>कुनै एउटा समस्यामध्ये मामिलाको अध्ययन गरी प्रस्तुतीको लागि तयारी गर्नु ६५ मिनेट प्रदान गरिनेछ, र प्रस्तुतीकरणको लागि प्रत्येक उमेदवारलाई छुट्टिहुँदै ३० मिनेटको समय उपलब्ध गराइने छ।</td>
<td></td>
</tr>
<tr>
<td>व्यक्तिगत अन्तर्विष्टि</td>
<td>३०</td>
<td>मौखिक</td>
<td>-</td>
</tr>
</tbody>
</table>
१. लिखित परीक्षा मा यथासम्भव पाठ्यक्रमका सवै एकाई वाटप्रश्नहरू सोधिनेछ ।

२. लिखित परीक्षाको माध्यम भाषा नेपाली वा अङ्ग्रेजी अथवा नेपाली र अङ्ग्रेजी दुवै हुन सक्नेछ ।

३. यथा सम्मानप्रश्नहरू नेपालको सन्दर्भमा सोधिनेछ ।

४. द्वितीय पत्रको विषयवस्तु प्रश्नका लागि तोकिएका १० अङ्कहरूको हकमा १० अङ्कको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटै प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोधन सकिने छ ।

५. यस पाठ्यक्रममा जेतूकी लेखिएको भएतापनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मितिभन्दा ३ महिनापर्याप्त (संशोधन भएका वा संशोधन भई हटाइएका वा वच गरी संशोधन भई ) कायम रहेको यस पाठ्यक्रममा परेको सम्मस्त पद्ध ।

६. प्रथम चरणको लिखित परीक्षाबाट छत्ती भएका उम्मेदबारहरूलाई मात्र द्वितीय चरणको अन्तर्वािमा सम्मिलित गराइनेछ ।

७. पाठ्यक्रम लागू मिति - २०७८/०२/१५
Paper- 1st: 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


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.
   2.8 Software cost estimation.
3. **Computer Architecture & Organization**

   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**

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**

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**

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.
9.4 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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