प्राविधिक सेवा, कम्प्युटर समूह, तह-७ वरिष्ठ कम्प्युटर अधिकृत पदको आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

एवं परीक्षा योजना

पाठ्यक्रमको रुपरेखा :– यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छ :

प्रथम चरण :– लिखित परीक्षा	पूर्णाङ्क :– १००	
द्वितीय चरण :– (क) प्रयोगात्मक	पूर्णाङ्क :– १००	
(ख) अन्तर्वार्ता	पूर्णाङ्क :– ३०	

प्रथम चरण : लिखित परीक्षा

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या x अंकभार	समय
प्रथम	कम्प्युटर सम्बन्धी	६०	३०	वस्तुगत बहुवैकल्पिक (Multiple Choice)	६० प्रश्न x१ =६०	२ घण्टा
		४०	२०	विषयगत (Subjective)	५ x८=४०	

द्वितीय चरण : प्रतियोगितात्मक र अन्तर्वार्ता

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	समय
(क) प्रयोगात्मक परीक्षा	१००	५०	प्रयोगात्मक	१ घण्टा
(ख) अन्तर्वार्ता	-	-	मौखिक	-

१. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी हुनेछ ।

२. पाठ्यक्रमको प्रथम पत्र लिखित परीक्षा तथा प्रयोगात्मक परीक्षाको विषयवस्तु एउटै हुनेछ ।

३. लिखित परीक्षा (विषयगत तथा वस्तुगत) का प्रश्न संख्या निम्नानुसार हुनेछन् ।

Course Unit	Topics	No. of Objective Questions	No of Subjective Question
1	Computer Fundamental	10	1
2	Operating System	10	1
3	Networking	5	
4	E-commerce Technology	5	
5	MIS and Web Engineering	5	1
6	Word Processing	3	
7	Electronic Spreadsheets	3	
8	Database System	3	1
9	Presentation system	3	
10	IT in Nepal	3	
11	Adobe In design	5	1
12	Graphic Design	5	
	Total:	**60**	**5**

गोरखापत्र संस्थान

प्राविधिक सेवा, कम्प्युटर समूह, तह-७ वरिष्ठ कम्प्युटर अधिकृत पदको आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

४. प्रयोगात्मक परीक्षाका प्रश्न संख्या निम्नानुसार हुनेछन् ।

S.No	Topics	No. of Question	Marks	Time-Minutes
1	Hardware Setup	3	15	10
2	Operating System Setup	1	15	10
3	Printer Sharing/ File Sharing/ Quata Management/ Unicode setup/ User Management	3	45	20
4	Computer Networking (IP Addressing/ Router Configuration)	2	20	10
5	Computer Backup and Restore Using Team Viewer	1	5	10
	Total:-	10	100	60

५. प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।

प्राविधिक सेवा, कम्प्युटर समूह, तह-७ वरिष्ठ कम्प्युटर अधिकृत पदको आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

प्रथम पत्र :– कम्प्युटर सम्वन्धी विषय

1. Computer Fundamentals

1.1. Computers, Kinds of Computers in respect of size and function

1.2. Generation of Computers

1.3. Components and Architecture of Computers, Connecting the Components,

1.4. Getting started: Orientation to computers, system unit, Starting the computers

1.5. Software: Definition

    1.5.1. Types of Software

    1.5.2. Programming Language (Visual Basic Programming Language, "C" Programmin g Language).

    1.5.3. Application software: Using Application Software

1.6. Hardware: Definition

    1.1.1. Input Devices: The keyboard, The mouse, Other input devices

    1.1.2. Processing: CPU, Memory

    1.1.3. Storages devices: Overview of Storage Devices, The Floppy Disk Drive, The Hard Drive, The Universal Serial Bus(USB) Devices and Other Storage Devices

    1.1.4. Partition of HDD

    1.1.5. Output devices: Monitors, Printers, Modems, Soundboards

    1.1.6. Liveware, Firware and Cache Memory

1.7. Dos survival guide: Using Command Prompt, Creating and using AUTOEXEC.BAT and CONFIG.SYS

1.8. Windows survival guide: The Windows Desktop, The Program Manager, Organizing the Desktop, The File Manager

1.9. Dial-Up Networking, ADSL, DSL, Router, Switch

1.10. Windows Explorer, E-mails, Internet, Intranet, Extranets, Ethernet, HTTP

1.11. Concept of Computer related threats (Virus, Worms, Trojan, Phishing etc) remedies and protection

1.12. Concept of Multimedia

1.13. File Management basic :

    1.13.1. Physical Structure of the disk
    1.13.2. Concept of File and folder
    1.13.3. Wildcards and Pathname
    1.13.4. Types of files and file extensions

प्राविधिक सेवा, कम्प्युटर समूह, तह-७ वरिष्ठ कम्प्युटर अधिकृत पदको आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

2. **Operating Systems**

   2.1. Define an Operating System, Trace the Developments in Operating Systems, Identify the functions of Operating Systems,

   2.2. Describe the basic components of the Operating Systems, Understand Information Storage and Management Systems,

   2.3. List Disk Allocation and Scheduling Methods, Identify the Basic Memory Management strategies, List the Virtual Memory Management Techniques, Define a Process and list the features of the Process Management System

   2.4. Identify the Features of Process Scheduling; List the features of Inter-Process Communication and Deadlocks,

   2.5. Identify the Concepts of Parallel and Distributed Processing, Identify Security Threats to Operating Systems

   2.6. Overview of the MS-DOS Operating System

   2.7. Introduction to the Windows Family of Products,

   2.8. Introduction to Windows Networking

   2.9. Windows Architecture

   2.10. Troubleshooting Windows,

   2.11. Managing Network Printing

   2.12. Managing Hard Disks and Partitions

   2.13. Monitoring and Troubleshooting Windows

   2.14. Users, Groups and Permission Linux and Windows.

3. **Networking**

   3.1. Basic Network Theory: Network Definition, Network Models, Connectivity, Network Addressing.

   3.2. Network Connectivity: Data Package, Establishing a Connection, Reliable Delivery, Network Connectivity, Noise Control, Building Codes, Connection Devices.

   3.3. Advanced Network Theory: The OSI model, Ethernet, Network Resources, Token ring, FDDI, Wireless Networking.

   3.4. Common Network Protocols: Families of Protocols, NetBEUI, Bridge and Switches,The TCP/IP Protocol, Building TCP/IP Network, The TCP/IP Suite

   3.5. TCP/IP Services: Dynamic Host Configuration Protocol, DNS Name Resolution, NetBIOS support, SNMP, TCP/IP Utilities, FTP

   3.6. Network LAN Infrastructure: LAN Protocols on a Network, IP Routing, IP Routing

3.7. Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs(VLANS)

3.8. Network WAN Infrastructure: The WAN Environment, Wan Transmission Technologies, Wan Connectivity Devices, Voice Over Data Services

3.9. Remote Networking: Remote Networking, Remote Access protocols, VPN Technologies.

3.10. Computer Security: Computer Virus, Worm, Trojan Horse.

3.11. Network Security: Introduction, Virus Protection, Local Security, Network Access, Internet Security.

3.12. Disaster Recovery: The need for Disaster Recovery, Disaster Recovery plan, Data backup, Fault Tolerance.

3.13. Advanced Data Storage Techniques: Enterprise Data Storage, Clustering, Network Attached Storage, Storage Area Networks.

3.14. Network Troubleshooting: Using Systematic Approach to Troubleshooting.

3.15. Network Support Tools: Utilities, Network Baseline, Network Access Points (NAP), Common Network Component, Common Peripheral Ports.

4. **E-Commerce Technology**

4.1. Introduction to E-Commerce.

4.2. Electronic Commerce Strategies.

4.3. Electronic Commerce Security Issues.

4.4. Success Models of E-Governance.

4.5. E-Business: b2b, b2c, b2e, c2c, g2g, g2c.

4.6. Principles of Electronic Payment, Strategies & Systems.

4.7. E-marketing, Reverse Engineering.

4.8. E-Banking, EDI Methods, SWIFT.

4.9. Encryption and Decryption Methods, XML, Layout Managers, Event Model.

5. **MIS and Web Engineering**

5.1. Information Systems, Client-Server Computing.

5.2. Information Systems and Decision Making.

5.3. Database Design issues, Data Mining, Data Warehousing

5.4. Knowledge Management, The strategic use of Information Technology.

5.5. Work Process Redesign (Reengineering) with Information Technology, Enterprise

5.6. Resources Planning Systems, Information Systems Security, Information Privacy, Global Information Technology issues.

5.7. Software Supported Demonstrations including advanced Spreadsheet topics, Software

5.8. Component Based Systems (CBSE)

5.9. Multimedia

5.10. Object-Oriented Programming with COMS & DECOMS,

5.11. Group Decision Support Systems

5.12. Basics of Website Design.

6. **Word Processing**

6.1. Concept of Word Processing

6.2. Types of Word Processing

6.3. Introduction to Word Processor

6.4. Creating, Saving and Opening the documents

6.5. Elements of Word Processing Environment (Menu, Toolbars, Status bar, Rulers)

6.6. Copying, Moving, Deleting and Formatting Text (Font, Size, Color, Alignment, Line & Paragraph spacing)

6.7. Finding and Replacing text familiar with Devnagari Fonts

6.8. Creating lists with Bullets and Numbering

6.9. Creating and Manipulating Tables

6.10. Borders and Shading

6.11. Use of Indentation and Tab Setting

6.12. Creating Newspaper Style Documents using Column

6.13. Inserting Header, Footer, Footnotes, Endnotes, Page Numbers, File, Page break, Section break, Graphics, Pictures, Charts, Symbols & Organizational Chart

6.14. Opening and Saving different types of document

6.15. Changing Default Settings

6.16. Mail Merge

6.17. Autocorrect, Spelling, and Grammar Checking and Thesaurus

6.18. Customizing menu and toolbars

6.19. Security technique of documents

6.20. Master Document, Cross Reference, Index, Table of Content

6.21. Setting Page Layout, Previewing and Printing Documents

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7. Electronic Spreadsheet

7.1. Concept of Electronic Spreadsheet

7.2. Types of Electronic Spreadsheet

7.3. Organization of Electronic Spreadsheet application (Cells, Rows, Columns, Worksheet, Workbook, and Workspace)

7.4. Introduction to Spreadsheet Application

7.5. Creating, Opening and Saving Work Book

7.6. Elements of Electronic Spreadsheet Environment (Menu, Toolbars, Status bar, Rulers, Scrollbars, etc)

7.7. Editing, Copying, Moving, Deleting Cell contents

7.8. Familiar with Devnagari Fonts

7.9. Formatting Cells (Font, Border, Pattern, Alignment, Number and Protection)

7.10. Formatting Rows, Columns, and Sheets

7.11. Using Formula- Relative Cell and Absolute Cell Reference

7.12. Using basic functions

7.13. Generating Series

7.14. Changing default options

7.15. Sorting and Filtering data

7.16. Summarizing data with Sub-Totals

7.17. Creating chart

7.18. Inserting Header and Footer

7.19. Spell Checking

7.20. Customizing Menu and Toolbars

7.21. Importing from and Exporting into other formats

7.22. Pivot Table, Goal Seek, Scenario & Audit

7.23. Page Setting, Previewing and Printing

8. Database System

8.1. Introduction to Data, Database and DBMS

8.2. Basic Concept of Tables, Fields, Records, Relationships and Indexing

8.3. Introduction to database application

8.4. Data Types

8.5. Creating, Modifying & Deleting Tables and Formatting & Validating Field Data

8.6. Creating, Modifying, Deleting & Using Simple Queries

8.7. Creating, Modifying & Deleting Forms/Reports/Macros

9. Presentation System

9.1. Introduction to Presentation Application

9.2. Creating, Opening & Saving Slides, Formatting Slides

9.3. Slide Show

9.4. Animation

9.5.   Inserting Built-in-picture, Picture, Table, Chart, Graphs, Organizational Chart

10. IT in Nepal

10.1.   History of IT in Nepal
10.2.   Current IT Policy of Nepal
10.3.   Electronic Transaction Act, 2063
10.4.   Copyright Act, 2059
10.5.   Uses of Computers and Software Development
10.6.   Nepali Unicode, Nepali Fonts
10.7.   Licensing Issue

11. Abode In Design

11.1.   Introduction to Adobe In Design CS6
11.2.   Creating and Viewing Documents
11.3.   Understanding Your Workspace
11.4.   Pages
11.5.   Working with Type
11.6.   Working with Graphics
11.7.   Formatting Objects
11.8.   Working with Color
11.9.   Points and Paths
11.10. Managing and Transforming Objects
11.11. Character and Paragraph Formatting
11.12. Using Styles
11.13. Tables
11.14. Long and Interactive Documents
11.15. Packaging and Printing

12. Graphic Design

12.1   The Principle of Graphic Design
12.2   Theory of Design
12.3   Colour and Materials
12.4   How to use of typography
12.5   History of Graphic Design