

काठमाण्डौ उपत्यका खानेपानी लिमिटेड

प्रशासन सेवा, प्रशासन समुह, ६ तह, सहायक प्रशासन अधिकृत (कम्प्युटर) पदको खुल्ला तथा समावेशी र आन्तरिक प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

१. प्रथम चरण : लिखित परीक्षाको योजना (Examination Scheme)

पत्र	बिषय	प्रश्न संख्या x अंकभार	परीक्षा प्रणाली	समय	पूर्णाङ्क	उत्तिर्णाङ्क
प्रथम पत्र	सेवा सम्बन्धी: कम्प्युटर	५०x१=५० १०x५=५०	बस्तुगत बहुउत्तर छोटो छोटो उत्तर	३ घण्टा	१००	४०

२. द्वितीय चरण : प्रयोगात्मक

बिषय	प्रश्न संख्या x अंकभार	परीक्षा प्रणाली	समय	पूर्णाङ्क	उत्तिर्णाङ्क
कम्प्युटर संचालन सम्बन्धी				५०	२०

३. तृतीय चरण : अन्तर्वार्ताको योजना

बिषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	२०	मौखिक

द्रष्टव्य : उम्मेदवारहरूले ध्यान दिनुपर्ने कुराहरू

- लिखित परीक्षाको माध्यम नेपाली/अंग्रेजी दुबै हुन सक्नेछ ।
- प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरू मात्र द्वितीय चरणको र द्वितीय चरणको प्रयोगात्मक परीक्षाबाट छनौट भएका उम्मेदवारहरू मात्र तृतीय चरणको अन्तर्वार्तामा सम्मिलित हुन पाउनेछन् ।
- पाठ्यक्रममा भएका यथासम्भव सबै पाठ्यांशहरूबाट प्रश्न सोधिनेछ ।
- यस पाठ्यक्रममा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- यस भन्दा अगाडि लागु भएको माथि उल्लेखित समूहको पाठ्यक्रम खारेज गरिएको छ ।
- पाठ्यक्रम लागु मिति २०७३ आश्विन ।

प्रथम पत्र
सेवा सम्बन्धी: कम्प्यूटर

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 personal computers, The system unit, Starting the computers
- 1.5 **Input Devices:** The keyboard, The mouse, Other input devices
- 1.6 **Processing:** CPU, Memory
- 1.7 **Storage devices:** Overview of Storage Devices, The Floppy Disk Drive, The Hard Drive, The Universal Serial Bus (USB) Devices and Other Storage Devices
- 1.8 **Output devices:** Monitors, Printers, Modems, Soundboards
- 1.9 **Dos survival guide:** Using Command Prompt, Creating and using AUTOEXEC.BAT and CONFIG.SYS
- 1.10 **Windows survival guide:** The Windows Desktop, The Program Manager, Organizing the Desktop, The File Manager
- 1.11 **Application software:** Using Application Software
- 1.12 Windows Explorer, E-mails, Internet, Intranet, Extranets, Ethernet, HTTP
- 1.13 Computer Viruses, Antivirus

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, Unix Family of Products, Linux Family of Products.
- 2.8 Introduction to Windows Networking
- 2.9 Windows Architecture, Linux Architecture
- 2.10 Troubleshooting Windows, & Linux
- 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:** The 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 Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs(VLANS)
- 3.7 **Network WAN Infrastructure:** The WAN Environment, Wan Transmission Technologies, Wan Connectivity Devices, Voice Over Data Services
- 3.8 **Remote Networking:** Remote Networking, Remote Access protocols, VPN Technologies.
- 3.9 **Computer Security:** Computer Virus, Worm, Trojan Horse.
- 3.10 **Network Security:** Introduction, Virus Protection, Local Security, Network Access, Internet Security.
- 3.11 **Disaster Recovery:** The need for Disaster Recovery, Disaster Recovery plan, Data backup, Fault Tolerance.
- 3.12 **Advanced Data Storage Techniques:** Enterprise Data Storage, Clustering, Network Attached Storage, Storage Area Networks.
- 3.13 **Network Troubleshooting:** Using Systematic Approach to Troubleshooting.
- 3.14 **Network Support Tools:** Utilities, The Network Baseline.
- 3.15 **Network Access Points (NAP), Common Network Component, Common Peripheral Ports.**

4. IT in Nepal

- 4.1 History of IT in Nepal,
- 4.2 IT Policy of Nepal, 2057 B.S.
- 4.3 Cyber law of Nepal (Electronic Transaction Ordinance, 2061 B.S.)
- 4.4 Copy Write Act, 2022 B.S.
- 4.5 Uses of Computers and Software Development
- 4.6 Nepali Unicode, Nepali Fonts
- 4.7 Licensing Issues