

पाटन संग्रहालय
सहायक पाँचौं तह. सचना प्रविधि सहायक पदको खला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार भागमा परीक्षा लिइनेछ ।

भाग १ :- लिखित परीक्षा पूर्णाङ्क :- १००
भाग २ :- प्रयोगात्मक परीक्षा र अन्तर्वार्ता पूर्णाङ्क :- ७०

भाग १ :- लिखित परीक्षा योजना (Written Examination Scheme)

पत्र/विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या X अङ्क	समय
प्रथम: कम्प्युटर सम्बन्धी विषय	१००	४०	वस्तुगत (Objective): बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न X १ अङ्क = ५०	४५ मिनेट
			विषयगत (Subjective)	८ प्रश्न X ५ अङ्क = ४० १ प्रश्न X १० अङ्क = १०	१ घण्टा १५ मिनेट

भाग २ :- प्रयोगात्मक परीक्षा र अन्तर्वार्ता (Practical Test & Interview)

विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या X अङ्क	समय
(क) प्रयोगात्मक परीक्षा (Practical Test)	५०	२५	प्रयोगात्मक	५ प्रश्न X १० अङ्क = ५०	१ घण्टा
(ख) अन्तर्वार्ता (Interview)	२०	-	मौखिक	-	-
जम्मा	७०				

द्रष्टव्य :

- यो पाठ्यक्रम योजनालाई भाग १ (लिखित परीक्षा) र भाग २ (प्रयोगात्मक परीक्षा र अन्तर्वार्ता) गरी दुई भागमा विभाजन गरिएको छ ।
- लिखित परीक्षामा प्रश्न पत्रहरूको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- लिखित परीक्षामा बहुवैकल्पिक, छोटो र लामो उत्तर दिने प्रश्नहरू तथा प्रयोगात्मक परीक्षामा यथासम्भव निम्नानुसार प्रश्नहरू सोधिनेछ ।

पत्रका एकाई	1	2	3	4	5	6	7	8	9
वस्तुगत प्रश्न संख्या	9	3	8	8	3	5	5	3	6
विषयगत प्रश्न संख्या	1	1	1	1	1	1	1	1	1
प्रयोगात्मक प्रश्न संख्या	-	1	1	1			1	-	1

- बहुवैकल्पिक प्रश्नहरू (MCQs) को उत्तर सही दिएमा प्रत्येक सही उत्तर बापत १ (एक) अङ्क प्रदान गरिनेछ, भने गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अर्थात् ०.२ अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- एउटा १० अङ्कको लामो उत्तर दिने विषयगत प्रश्न माथि तालिकामा तोकिएको जुनसुकै एकाईबाट सोध्न सकिने छ ।
- भाग १ को परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र भाग २ को परीक्षामा सम्मिलित गराइनेछ ।
- भाग १ (लिखित परीक्षा) र भाग २ (प्रयोगात्मक परीक्षा र अन्तर्वार्ता) को कुल अङ्क योगका आधारमा परीक्षाफल प्रकाशित गरिनेछ ।

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प्रथम पत्र :- कम्प्युटर सम्बन्धी विषय

1. Computer Fundamentals

- 1.1. Computer: - Definition, History, Generation, Characteristics, Types & Applications.
- 1.2. Overview of a computer system:-
 - 1.2.1. Data and data processing
 - 1.2.2. Hardware
 - 1.2.2.1. Definition of Hardware
 - 1.2.2.2. Input Unit: Keyboard, Mouse, Scanner, etc
 - 1.2.2.3. CPU: Arithmetic Logic Unit, Control Unit, Memory Unit
 - 1.2.2.4. Output Unit: Monitor, Printer, etc
 - 1.2.2.5. Storage devices:- Primary & Auxiliary Memory (Floppy Disk, Hard Disk, Compact Disk, DVD, Flash disk etc.)
 - 1.2.2.6. Others:- Network card, Modem, Sound card, etc.
 - 1.2.3. Software (Definition & Types of Software, Programming Language)
 - 1.2.4. Liveware
 - 1.2.5. Firmware and Cache Memory
- 1.3. Setting & protection of Computer Room and Computer
- 1.4. Concept of Computer related threats (virus, worms, Trojan, phishing etc) remedies and protection
- 1.5. File Management basic:
 - 1.5.1. Physical Structure of the disk
 - 1.5.2. Concept of File and folder
 - 1.5.3. Wildcards and Pathname
 - 1.5.4. Type of files and file extensions
- 1.6. Introduction to ASCII and Unicode standards
- 1.7. Electronic Transaction Act 2008

2. Operating System

- 2.1. Introduction to Operating System
- 2.2. Types of Operating System
- 2.3. Functions of Operating Systems
- 2.4. Command line operation (e.g. copy command, move command, command to view and set different file attributes etc)
- 2.5. Windows
 - 2.5.1. Introduction to GUI
 - 2.5.2. Introduction of Windows Operating System
 - 2.5.2.1. Basic Windows Elements - Desktop, Taskbar, My Computer, Recycle Bin, etc.
 - 2.5.2.2. Starting and shutting down Windows
 - 2.5.2.3. File Management with Windows Explorer
 - 2.5.2.4. Windows applications: (e.g. Control Panel, Character Map, Paint etc)
 - 2.5.2.5. Finding files of folders and saving the result
 - 2.5.2.6. Starting a program by command line operation
 - 2.5.2.7. Changing window settings (Adding/Removing programs, Clearing the contents of document menu, Customizing the taskbar, Control panel items)
 - 2.5.2.8. Creating shortcut (icons) on desktop
 - 2.5.2.9. System tools:- disk scanning, disk defragmenter, backup, restore, format

3. Word Processing

- 3.1. Concept of Word Processing
- 3.2. Types of Word Processing

3.3. Introduction to Word Processor

- 3.3.1. Creating, Saving and Opening the documents
- 3.3.2. Elements of Word Processing Environment (Menu, Toolbars, Status bar, Rulers, Scrollbars, etc.)
- 3.3.3. Copying, Moving, Deleting and Formatting Text (Font, Size, Color, Alignment, line & paragraph spacing)
- 3.3.4. Finding and Replacing Text
- 3.3.5. Familiar with Devnagari Fonts
- 3.3.6. Creating lists with Bullets and Numbering
- 3.3.7. Creating and Manipulating Tables
- 3.3.8. Borders and Shading
- 3.3.9. Use of Indentation and Tab Setting
- 3.3.10. Creating Newspaper Style Documents Using Column
- 3.3.11. Inserting Header, Footer, Footnotes, Endnotes, Page Numbers, File, Page break, Section break, Graphics, Pictures, Charts, Word Art, Symbols & Organization Chart
- 3.3.12. Mail Merge
- 3.3.13. AutoCorrect, Spelling and Grammar Checking, and Thesaurus
- 3.3.14. Security Technique of Documents
- 3.3.15. Setting Page Layout, Previewing and Printing Documents

4. Electronic Spreadsheet

- 4.1. Concept of Electronic Spreadsheet
- 4.2. Types of Electronic Spreadsheet
- 4.3. Organization of Electronic Spreadsheet application (Cells, Rows, Columns, Worksheet, Workbook and Workspace)
- 4.4. Introduction to spreadsheet application
 - 4.4.1. Creating, Opening and Saving Work Book
 - 4.4.2. Elements of Electronic Spreadsheet Environment (Menu, Toolbars, Status bar, Rulers, Scrollbars, etc.)
 - 4.4.3. Editing, Copying, Moving, Deleting Cell Contents
 - 4.4.4. Familiar with Devnagari Fonts
 - 4.4.5. Formatting Cells (Font, Border, Pattern, Alignment, Number and Protection)
 - 4.4.6. Formatting Rows, Column and Sheets
 - 4.4.7. Using Formula - Relative Cell and Absolute Cell Reference
 - 4.4.8. Using basic Functions
 - 4.4.9. Creating Chart
 - 4.4.10. Inserting Header and Footer
 - 4.4.11. Page Setting, Previewing and Printing

5. Presentation System

- 5.1. Introduction to presentation application
 - 5.1.1. Creating, Opening & Saving Slides
 - 5.1.2. Formatting Slides
 - 5.1.3. Slide Show
 - 5.1.4. Animation
 - 5.1.5. Inserting Built-in picture, Picture, Table, Chart, Graphs, and Organization Chart etc.

6. Database Management System and Design

- 6.1. Introduction, A Database Model, Relational Database Model, Integrity, RDBMS.
- 6.2. SQL and Embedded SQL

- 6.3. Writing Basic SQL SELECT Statements
- 6.4. Restricting and Sorting data
- 6.5. Single Row Functions
- 6.6. Displaying Data from Multiple Tables
- 6.7. Aggregation Data Using Group Functions
- 6.8. Sub Queries, Manipulating Data and Creating & Managing Tables
- 6.9. Creating Views and Controlling User Access
- 6.10. Using Set Operators, Date time Function
- 6.11. Database Design: Logical Design, Conceptual Design, Mapping Conceptual to Logical, Pragmatic issues, Physical Design, Integrity and Correctness, Relational Algebra, Relational Calculus.
- 6.12. Normalization: 1NF, 2NF, 3NF
- 6.13. Basic Concept of major RDBMS products: Oracle, Sybase, DB2, SQL Server and other Databases.
- 7. Programming Language**
 - 7.1. Overview of Programming Language: History, Programming Paradigms, The role of Language translates in the Programming Process.
 - 7.2. Fundamental Issues in Language Design.
 - 7.3. Virtual Machines, Code Generation, Loop Optimization.
 - 7.4. Concept of Procedural Programming, Structural Programming, Object-Oriented Programming.
 - 7.5. Concept of C programming, C++ Programming,
- 8. Networking**
 - 8.1. Basic Network Theory: Network Definition, Network Models, Connectivity, Network Addressing.
 - 8.2. Network Connectivity: The Data Package, Establishing a Connection, Reliable Delivery, Network Connectivity, Noise Control, Building Codes, Connection Devices.
 - 8.3. Advanced Network Theory: The OSI model, Ethernet, Network Resources, Token ring, FDDI, Wireless Networking.
 - 8.4. Common Network Protocols: Families of Protocols, NetBEUI, Bridge and Switches, The TCP/IP Protocol, Building TCP/IP Network, The TCP/IP Suite
 - 8.5. TCP/IP Services: Dynamic Host Configuration Protocol, DNS Name Resolution, NetBIOS support, SNMP, TCP/IP Utilities, FTP
 - 8.6. Network LAN Infrastructure: LAN Protocols on a Network, IP Routing, IP Routing Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs
 - 8.7. Network Troubleshooting: Using Systematic Approach to Troubleshooting.
- 9. Web site design, E-Commerce Technology and Relevant Rules Regulation**
 - 9.1. Introduction to Web Page and CMS (Content Management System)
 - 9.2. Introduction to HTML
 - 9.2.1. HTML document
 - 9.2.2. Tags
 - 9.2.3. Skeleton & Flesh (Text, Hyperlinks, Images, Lists & forms, Tables, Frames)
 - 9.3. Introduction to E-Commerce.
 - 9.4. Electronic Commerce Strategies.
 - 9.5. Electronic Commerce Security Issues.
 - 9.6. Success Models of E-Governance.
 - 9.7. E-Business: b2b, b2c, b2e, c2c, g2g, g2c.

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9.8. Encryption and Decryption Methods

9.9 पाटन संग्रहालय विकास समिति गठन आदेश, २०५३ पहिलो र दोस्रो संशोधन सहित

9.10 पाटन संग्रहालय विकास समिति, कर्मचारी (सेवा, सर्त तथा सुविधा) नियमावली, २०७०

बहुवैकल्यिक नमूना प्रश्नहरू (Sample questions)

1. SCANDISK analyze and repairs damage to which of the following
A. Physical clusters B. FAT C. Lost Clusters D. All of the above
2. The two parts of the CPU are
A. Control unit and memory B. Addresses and ALU
C. Addresses and Registers D. Control Unit and ALU
3. Operating is a
A. System Software B. Application Software
C. Presentation Software D. Database Software
4. Which key is used to work with non-adjacent cells in excel?
A. Shift key B. Ctrl key C. Alt key D. Tab key
5. The database element that represents a correspondence between the various data element is
A. Data B. Information C. Constraints D. Schema
6. Currently the most popular database model is
A. Hierarchical B. Object-Oriented C. Relational D. Deductive
7. When we download anything from the internet which protocol works:
A. TCP/IP B. FTP C. HTTP D. ARP
8. What e-commerce category is the largest in terms of revenue?
A. Business to Business (B2B) B. Intra-Business (B2E)
C. Business to Consumer (B2C) D. Consumer to Consumer (C2C)
9. How is data transferred in serial communications?
A. 10 bits at a time. B. 1 bit at a time.
C. 1 byte at a time. D. 6 bits at a time
10. With respect to the interface network card, what does the term 10/100 refer to?
A. Protocol speed. B. A fiber network
C. Megabits per second. D. Minimum and maximum server speed
11. A workstation has just been installed on the Ethernet LAN but cannot communicate with the network. What should you do first?
A. Reinstall the network protocols.
B. Reinstall the network interface card driver.
C. Verify the IP configuration on the workstation.
D. Verify the link status on the computer's network card.

प्रयोगात्मक परीक्षाका नमूना प्रश्नहरू

1. Using C program Draw Result

1 2
2 3
3 4
4 5

2. Create tables Student, Teacher, Course is SQL .
Student (Sid, Sname, subject, level)

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Teacher (Tid, Tname, subject,)

Course (Cid, Cnumber, Tname, level)

- a. Insert 10 values
- b. Delete first two values.