

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान सेवा आयोग
प्राविधिक सेवा, सुचना प्रविधि समूह, तह ५, सुचना प्रविधि सहायक पदको आन्तरिक प्रतियोगितात्मक परीक्षाको
पाठ्यक्रम
एवं परीक्षा योजना

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

प्रथम चरण :- लिखित परीक्षा पूर्णाङ्क :- १००

द्वितीय चरण :- अन्तर्वार्ता पूर्णाङ्क :- २०

प्रथम चरण :- लिखित परीक्षा

पत्र	विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या X अङ्क	समय
प्रथम	सुचना प्रविधि सेवा सम्बन्धी	१००	४०	बहुवैकल्पिक प्रश्न	२५ प्रश्न X २ अङ्क	२ घण्टा
				छोटो उत्तर	६ प्रश्न X ५ अङ्क	
				लामो उत्तर	२ प्रश्न X १० अङ्क	

द्वितीय चरण :- अन्तर्वार्ता

विषय	पूर्णाङ्क	परीक्षा प्रणाली	समय
व्यक्तिगत अन्तर्वार्ता	२०	मौखिक (Oral)	

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नका लागि तोकिएका १० अङ्कका प्रश्नहरूको हकमा १० अङ्कको एउटा लामो प्रश्न वा एउटै 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 ।
- पाठ्यक्रममा भएका यथासम्भव सबै पाठ्यांशहरूबाट प्रश्न सोधिनेछ।
- प्रथम चरण** को लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरू मात्र **द्वितीय चरण** को अन्तर्वार्तामा सम्मिलित हुन पाउनेछन् ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- पाठ्यक्रम लागु हुने मिति : २०७४/०६/२९

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान सेवा आयोग
प्राविधिक सेवा, सुचना प्रविधि समूह, तह ५, सुचना प्रविधि सहायक पदको आन्तरिक प्रतियोगितात्मक परीक्षाको
पाठ्यक्रम
लिखित परीक्षाको पाठ्यक्रम

1. Computer Fundamentals

1.1. Computer :- Introduction, Characteristics, Types and Applications of Computer

1.2. Overview of a computer system:-

1.2.1. Hardware

1.2.1.1. Input Unit: Keyboard, Mouse and Scanner

1.2.1.2. CPU: Arithmetic Logic Unit, Control Unit, Memory Unit

1.2.1.3. Output Unit: Monitor, Printer, etc.

1.2.1.4. Storage devices: Primary Memory (RAM, ROM, Cache, Register) & Auxiliary Memory (Floppy Disk, Hard Disk, Compact Disk, DVD, Flash disk)

1.2.1.5. Others: Network card, Modem, Sound card, etc.

1.2.2. Software:- Definition, Types of Software and Programming Language

1.3. Introduction to ASCII, Unicode standards and font types

1.4. Security

1.4.1. Physical Security of Information Technology Infrastructure

1.4.2. Digital security: Antivirus, Firewalls, Antispyware, User authentication types, IPS/IDS

1.4.3. Common security threats: Social engineering, Malware, Phishing, Spyware, Viruses, Worms, Trojans, Distributed Denial of Services

1.5. Basic electronics

1.5.1. Difference between vacuum tube and semiconductor

1.5.2. Working principal and use of:- P-N junction diode, Zener diode, light emitting diode, Bipolar junction transistor

1.5.3. Basic concept of integrated circuits and its use

2. Hardware Maintenance and troubleshooting

2.1. Hardware Maintenance

2.1.1. Configure and apply BIOS settings

2.1.2. Motherboard components, their properties and purposes (RAM slots, Chipsets, Jumpers, CPU sockets, etc)

2.1.3. Installing and configuring expansion cards (Sound cards, Network cards, Graphics cards, etc)

2.1.4. Installing and configuring storage devices

2.1.5. Types and features of display devices (CRT, LCD, LED, Plasma)

2.1.6. Connector types (BNC, RJ45, HDMI) and associated cables

2.1.7. Installing and configuring various peripheral devices (Mouse, Keyboard, Scanner, Printer, Speaker)

2.2. Troubleshooting

2.2.1. Troubleshooting of computer and its peripherals (keyboard, mouse, printer, scanner, speaker)

2.2.2. Troubleshooting of connectivity (cables, network, etc)

2.2.3. Troubleshooting of memory, processor, storage, display

2.2.4. Troubleshooting of operating system and application software

3. Operating System

3.1. Introduction, Types and Functions of operating systems

3.2. Basic components of the operating systems

3.3. Concept of file, folder, shortcut, desktop, etc.

3.4. Introduction to the Windows Family of Products and Unix Family of Products

3.5. Installation, backup, recovery and optimization of operating system

3.6. Managing information storage, disks and partitions

3.7. Managing Directory service, Users, Groups and Permissions

3.8. Managing Network Printing

3.9. Sharing file, folder, printer, application, etc.

3.10. Installation and configuration of device drivers, applications, fonts

3.11. Identifying and managing Security Threats to Operating Systems

4. Networking

4.1. Basic Networking: Definition, Types, Topologies

4.2. Client server and peer to peer network

4.3. Connectivity and media: Network cables and connectors

4.4. OSI Reference model

4.5. Common TCP and UDP ports, protocols, and their purpose (e.g. Http, Ftp etc.)

4.6. Network devices their functions, features and configuration. (Switch, Router, Access point, Modem, Firewall etc.)

4.7. Application of Network utilities (e.g. IPCONFIG, PING, TRACERT, NSLOOKUP)

4.8. Network cabling and cable testing

4.9. Familiarity with IP Addressing, subnet mask, gateway, DNS, WINS, static and automatic address assignment

4.10. Data Encryption Standards

4.11. Multiplexing and multiple access technique, switching technique and system

5. Office Package (Word Processing, Spreadsheet and Presentation System)

- 5.1. Concept of Office Package
- 5.2. Creating, Saving and Opening the documents
- 5.3. Editing and formatting (Text, Paragraph, Page, Cells, Rows, Columns, Worksheet, Slides etc.) of documents
- 5.4. Copying, Moving, Deleting Finding and Replacing, Bullets and Numbering, Tables, Borders and Shading, Indentation and Tab Setting, Columns, Header, Footer, Footnotes, Endnotes, Page Numbers, Page break, Section break, Graphics, Pictures, Charts, Word Art, Symbols, Creating and editing Charts
- 5.5. Mail Merge
- 5.6. AutoCorrect, Spelling and Grammar Checking, and Thesaurus
- 5.7. Using Formula with Relative Cell and Absolute Cell Reference
- 5.8. Using Functions
- 5.9. Formatting Slides, Slide Show and Animations
- 5.10. Document Security
- 5.11. Document previewing and Printing

6. Web Technology

- 6.1. Introduction to Web Page and Content Management System
- 6.2. Introduction to HTML
- 6.3. HTML document
 - 6.3.1. HTML Tags
 - 6.3.2. Working with Text, Hyperlinks, Images, Lists, Forms, Tables, Frames, etc.
- 6.4. Familiarity with Cascading Style Sheet, Rich Site Summary and social networking
- 6.5. Concept of Web server and Proxy server
- 6.6. Social media in governance

7. Database Management System

- 7.1. Introduction to Database and Database Management System
- 7.2. Database design and Normalization
- 7.3. Basic concept of Tables, Fields, Records, Relationships and Indexing
- 7.4. Introduction to database applications
- 7.5. Common data types
- 7.6. Familiarity with Structured Query Language statements for manipulating database objects and information from database
- 7.7. Creating, modifying and deleting forms/reports

8. Software Engineering

- 8.1. Introduction to software engineering
- 8.2. System analysis and design
- 8.3. Software development life cycle, software project management
- 8.4. Software design, requirement analysis and specification
- 8.5. Software reliability, testing and maintenance

9. Relevance Laws and Agencies

- 9.1. Patan Academy of Health Sciences Act, 2064 (2008)
- 9.2. Patan Academy of health Science rules and regulation of facilities term and condition of personnel
- 9.3. Patan hospital operating law
- 9.4. Electronic Transaction Act, 2063
- 9.5. IT Policy and IT related agencies

10. Management Information System

- 10.1 Foundation Concepts in Information System
- 10.2 Telecommunications and Network for Business
- 10.3 Introduction to e-Business System
- 10.4 Enterprise Information System
- 10.5 Intelligent Information System
- 10.6 Developing Business/IT Strategies
- 10.7 Information Security and Ethical Challenges.