**प्रदेश लोक सेवा आयोग, कर्णाली प्रदेश**

**प्रदेश निजामती सेवा अन्तर्गत विविध सेवा, अधिकृतस्तर सातौं तह, कम्प्युटर ईन्जिनियर पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम र परीक्षा योजना**

पाठ्यक्रमको रूपरेखाः -यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ।

| | | |
|---|---|---|
| प्रथम चरणः- | लिखित परीक्षा (Written Examination) | पूर्णाङ्कः -२०० |
| अन्तिम चरणः- | (क) सामूहिक परीक्षण (Group Test) | पूर्णाङ्कः - १० |
| | (ख) अन्तर्वार्ता (Interview) | पूर्णाङ्कः -३० |

**<u>परीक्षा योजना) Examination Schedule)</u>**

१ .प्रथम चरणः लिखित परीक्षा) Written Examination) पूर्णाङ्कः २००

| पत्र | विषय | खण्ड | पूर्णाङ्क | उत्तीर्णाङ्क | परीक्षा प्रणाली | प्रश्नसंख्या Xअङ्क | समय |
|---|---|---|---|---|---|---|---|
| प्रथम | General Subject | Part I: General Knowledge and General Ability Test | १०० | ४० | वस्तुगत (Objective): बहुबैकल्पिक प्रश्न (Multiple Choice Questions) | ५०X१=५० | १ घण्टा ३०मिनेट |
| | | Part II: General Technical Subject | | | | ५०X१=५० | |
| द्वितीय | Technical Subject | | १०० | ४० | विषयगत (Subjective) : छोटो उत्तर लामो उत्तर | ८X५=४० ६X१०=६० | ३ घण्टा |

२.अन्तिम चरणः सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview) पूर्णाङ्कः ४०

| पत्र/विषय | पूर्णाङ्क | परीक्षा प्रणाली | समय |
|---|---|---|---|
| सामूहिक परीक्षण (Group Test) | १० | सामूहिक छलफल (Group Discussion) | ३० मिनेट |
| अन्तर्वार्ता (Interview) | ३० | बोर्ड अन्तर्वार्ता (Board Interview) | |

**द्रष्टव्यः**

१. यस पाठ्यक्रमलाई प्रथम चरण र अन्तिम चरण (सामूहिक परीक्षण र अन्तर्वार्ता) मा विभाजन गरिएको छ ।

२. खुला र समावेशी समूहको एउटै प्रश्नपत्रको माध्यमबाट परीक्षा सञ्चालन हुनेछ ।

३. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी वा नेपाली र अंग्रेजी दुवै हुनेछ ।

४. वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरुको 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 ।

५. बहुवैकल्पिक प्रश्नहरु हुने परीक्षामा क्याल्कुलेटर प्रयोग गर्न पाइने छैन ।

६. विषयगत प्रश्नहरुको हकमा तोकिएको अङ्कमा 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 टिप्पणीहरु (Short notes) सोध्न सकिनेछ ।

७. परीक्षामा सोधिने प्रश्नसंख्या, अङ्क र अङ्कभार यथासम्भव सम्बन्धित पत्र/विषयमा दिईए अनुसार हुनेछ ।

८. विषयगत प्रश्न हुने पत्र/विषयका प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तर पुस्तिकाहरु हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरुको उत्तर सोही खण्डको उत्तर पुस्तिकामा लेख्नुपर्नेछ ।

९. यस पाठ्यक्रम अनुसारका पत्र/विषयका विषयवस्तुमा जुनसुकै कुरा लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरु परीक्षाको मिति भन्दा ३ महिना अगावै संशोधन भई कायम रहेका विषयवस्तुलाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।

१०. लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरुलाई मात्र अन्तिम चरणको सामूहिक परीक्षण र अन्तर्वार्तामा सम्मिलित गराइनेछ ।

११. लिखित परीक्षा, सामूहिक परीक्षण र अन्तर्वार्ताको कुल प्राप्ताङ्कको आधारमा अन्तिम परीक्षाफल प्रकाशित गरिनेछ ।

१२. पाठ्यक्रम लागू हुने मितिः २०७९।०६।२५

## प्रथमपत्र (PaperI): General Subject

**Part (I):- General Knowledge & General Ability Test (50 Marks)**

1. **General Knowledge and Contemporary Issues (25 ×1 Mark = 25 Marks)**

1.1 Physical, socio-cultural and economic geography and demography of Nepal

1.2 Major natural resources of Nepal

1.3 Geographical diversity, climatic conditions, livelihood and lifestyle of the people of Nepal

1.4 Notable events and personalities, socio-economic and cultural conditions in modern history of Nepal

1.5 Current periodic plan of Karnali Province and Nepal.

1.6 Information on sustainable development, environment, pollution, climate change, biodiversity, science and technology

1.7 Nepal's international affairs and general information on the UNO, SAARC & BIMSTEC

1.8 The Constitution of Nepal

1.9 Governance system and Government (Federal, Provincial and Local)

1.10 Provisions of prevailing civil service act and regulation

1.11 Functional scope of public services

1.12 Public Service Charter

1.13 Concept, objective and importance of public policy

1.14 Fundamentals of management: planning, organizing, staffing, directing, controlling, coordinating, decision making, motivation and leadership

1.15 Government planning, budgeting, accounting and public assets management system

1.16 Major events and current affairs of national and international importance

2**. General Ability Test (25 ×1 Mark = 25 Marks)**

2.1 Verbal Ability Test (8×1 Mark = 8 Marks)

Jumble words, Series, Analogy, Classification, Coding-Decoding, Matrix, Ranking Order Test, Direction and Distance Sense Test, Common Sense Test, Logical Reasoning, Assertion and Reason, Statement and Conclusions

2.2 Numerical Ability Test (9×1 Mark = 9 Marks)

Series, Analogy, Classification, Coding, Arithmetical reasoning/operation, Percentage, Ratio, Average, Loss & Profit, Time & Work, Data interpretation & Data verification

2.3 Non-verbal/Abstract Ability Test (8×1 Mark = 8 Marks)

Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion/Finding, Analytical Reasoning Test, Figure Formation and Analysis, Rule Detection, Water images, Mirror images, Cubes and Dice & Venn-diagram

## Part (II) :- General Technical Subject (50 Marks)

**1. Digital Design and Computer Architecture (6 x 1 Marks = 6 Marks)**

1.1. Digital Design

- 1.1.1. Digital and Analog Systems
- 1.1.2. Number Systems
- 1.1.3. Logic Elements
- 1.1.4. Combinational Logic Circuits
- 1.1.5. Sequential Logic
- 1.1.6. Arithmetic Circuits
- 1.1.7. MSI Logic Circuits
- 1.1.8. Counters and Registers
- 1.1.9. IC logic families
- 1.1.10. Interfacing with Analog Devices
- 1.1.11. Memory Devices
- 1.1.12. 7400 TTL

1.2. Computer Architecture

- 1.2.1. Basic Structures: sequential circuits, design procedure, state table and state diagram, Von Neumann / Harvard architecture, RISC/CISC architecture
- 1.2.2. Addressing Methods and Programs, representation of data, arithmetic operations, basic operational concepts, bus structures, instruction cycle and excitation cycle
- 1.2.3. Processing Unit: instruction formats, arithmetic and logical instruction
- 1.2.4. Addressing modes
- 1.2.5. Input Output Organization: I/O programming, memory mapped I/O, basic interrupt system, Direct Memory Access (DMA)
- 1.2.6. Arithmetic Operations
- 1.2.7. Memory Systems
- 1.2.8. I/O Modules: Programmed I/O, Interrupt driven I/O

**2. Operating System (4 x 1 Marks = 4 Marks)**

2.1. Processes and Threads: Symmetric Multiprocessing, Micro-kernels, Concurrency, Mutual Exclusion and Synchronization, Deadlock

2.2. Scheduling

2.3. Memory Management

2.4. Input Output and Files: I/O devices and its organization, Principles of I/O software and hardware, Disks, Files and directories organization, File System Implementation

2.5. Distributed Systems: Distributed Message passing, RPC, Client/Server Computing, Clusters
2.6. Security: Authentication and Access Authorization, System Flaws and Attacks, Trusted system

**3. Computer Networks (6 x 1 Marks = 6 Marks)**

3.1. Protocol stack, OSI and TCP/IP models
3.2. Link Layer: services, error detection and correction, multiple access protocols, LAN addressing and ARP (Address Resolution Protocol), Ethernet, CSMA/CD multiple access protocol, Hubs, Bridges, and Switches, Wireless LANs, PPP (Point to Point Protocol), Wide area protocols
3.3. Network Layer: services, datagram and virtual circuits, routing principles and algorithms, Internet Protocol (IP), IP addressing, IP transport, fragmentation and assembly, ICMP (Internet Control Message Protocol), routing on the internet, RIP (Routing Information Protocol), OSPF (Open Shortest Path First), router internals, IPv6
3.4. Transport Layer: principles, multiplexing and de-multiplexing, UDP, TCP, flow control, principles of congestion control, TCP congestion control
3.5. Application Layer: Web and Web caching, FTP (File Transfer Protocol), Electronic mail, DNS (Domain Name Service), socket programming

**4. Data Structure and Algorithms (4 x 1 Marks = 4 Marks)**

4.1. General concepts: Abstract data Type, Time and space analysis of algorithms, Big O and theta notations, Average, best and worst case analysis
4.2. Linear data structures
4.3. Trees: General and binary trees, Representations and traversals, Binary search trees, balancing trees, AVL trees, 2-3 trees, red-black trees, self-adjusting trees, Splay Trees
4.4. Algorithm design techniques: Greedy methods, Priority queue search, Exhaustive search, Divide and conquer, Dynamic programming, Recursion
4.5. Hashing
4.6. Graphs and digraphs
4.7. Sorting: Bubble Sort, Merge Sort, Heap Sort, Radix Sort, Divide and conquer method

**5. Structured and Object Oriented Programming (4 x 1 Marks = 4 Marks)**

5.1. Concept of Procedural Programming, Structural Programming, Object-Oriented Programming
5.2. Data types, Abstract Data Types (ADT)
5.3. Operators, variables and assignments
5.4. Control structures

5.5. Procedure/function
5.6. Class definitions, encapsulation, inheritance, object composition, polymorphism
5.7. Concept of C programming, C++ Programming

**6. Database Management System (6 x 1 Marks = 6 Marks)**

6.1. The relational model, ER model
6.2. Structured Query Language (SQL)
6.3. Functional dependency, normalization and relational database design
6.4. Transaction Management and Concurrency Control: Concurrent execution of the user programs, transactions, Concurrency control techniques
6.5. Crash Recovery: types of failure, Recovery techniques
6.6. Query Processing and Optimization
6.7. Indexing: Hash based indexing, Tree based indexing
6.8. Distributed Database Systems and Object oriented database system
6.9. Data Mining and Data Warehousing
6.10. Database Security

**7. Software Engineering (6 x 1 Marks = 6 Marks)**

7.1. Software process: The software lifecycle models, risk-driven approaches
7.2. Software project management: Relationship to lifecycle, project planning, project control, project organization, risk management, cost models, configuration management, version control, quality assurance, metrics
7.3. Software requirements: Requirements analysis, requirements solicitation, analysis tools, requirements definition, requirements specification, static and dynamic specifications, requirements review, feasibility analysis
7.4. Software design: Design for reuse and with reuse, design for change, design notations, design evaluation and validation
7.5. Implementation: Programming standards and procedures, modularity, data abstraction, static analysis, unit testing, integration testing, regression testing, tools for testing, fault tolerance
7.6. Maintenance: The maintenance problem, the nature of maintenance, planning for maintenance
7.7. SE issues: Formal methods, tools and environments for software engineering, role of programming paradigm, process maturity and Improvement, ISO standards, SEI-CMM, CASE tools, Cohesion and coupling

**8. MIS and Web Engineering (4 x 1 Marks = 4 Marks)**

8.1. Information Systems and Decision Making; Knowledge Management.

8.2. Strategic use of Information Technology; Work Process Redesign (Reengineering) with Information Technology; Enterprise Resources Planning Systems

8.3. Information Systems Security, Information Privacy and Global Information Technology issues

8.4. Web Technology: Internet, Intranet, WWW, Static and Dynamic Web Page; Web Clients; Web Servers; Client Server Architecture: Single Tier, Two-Tier, Multi-Tier; HTTP: HTTP Request and Response; URL, Client Side Scripting, Server Side Scripting, Web 2.0, Web 3.0

8.5. Hyper Text Markup Language: Introduction to HTML; Elements of HTML Document; HTML Elements and HTML Attributes, Headings, Paragraph, Division, Formatting; Image element; Anchors; Lists; Tables; Frames; Forms

8.6. Client Side Scripting with JavaScript

8.7. Basics of AJAX; Introduction to XML and its application

**9. Theory of Computation (2 x 1 Marks = 2 Marks)**

9.1. DFA and NDFA, regular expressions, regular grammars

9.2. CFGs, Parsing and ambiguity, Pushdown automata, NPDAs & CFGs

9.3. Turing machines

9.4. Recursively enumerable languages Unrestricted grammars

9.5. The Chomsky hierarchy, Church's Thesis

9.6. Complexity Theory, P and NP

**10. Artificial Intelligence (4 x 1 Marks = 4 Marks)**

10.1. Search: Uninformed search techniques- depth first search, breadth first search, depth limit search, and search strategy comparison; Informed search techniques-hill climbing, best first search, greedy search

10.2. Architecture of Expert system, Knowledge acquisition, induction, Development of expert system

10.3. Automated reasoning: FOPL; Knowledge Representation Languages. Basic Concepts of Natural Language Processing (NLP)

10.4. Game Playing

**11. Advanced Topics in IT (4 x 1 Marks = 4 Marks)**

11.1. Parallel and distributed System

11.2. High speed networks

11.3. Different types of E-commerce

11.4. Software Project Management

11.5. Cloud Computing

11.6. IOT

## द्वितीयपत्र (Paper II):Technical Subject
## Section A - 30 Marks

### 1. Digital Design and Computer Architecture

1.1. Digital Design

- 1.1.1. Digital and Analog Systems
- 1.1.2. Number Systems
- 1.1.3. Logic Elements
- 1.1.4. Combinational Logic Circuits
- 1.1.5. Sequential Logic
- 1.1.6. Arithmetic Circuits
- 1.1.7. MSI Logic Circuits
- 1.1.8. Counters and Registers
- 1.1.9. IC logic families
- 1.1.10. Interfacing with Analog Devices
- 1.1.11. Memory Devices

1.2. Computer Architecture

- 1.2.1. Basic Structures : sequential circuits, design procedure, state table and state diagram, Von Neumann / Harvard architecture, RISC/CISC architecture
- 1.2.2. Addressing Methods and Programs, representation of data, arithmetic operations, basic operational concepts, bus structures, instruction cycle and excitation cycle
- 1.2.3. Processing Unit: instruction formats, arithmetic and logical instruction
- 1.2.4. Addressing modes
- 1.2.5. Input Output Organization : I/O programming , memory mapped I/O, basic interrupt system, Direct Memory Access (DMA)
- 1.2.6. Arithmetic Operations
- 1.2.7. Memory Systems

### 2. Operating System

2.1. Processes and Threads: Symmetric Multiprocessing, Micro-kernels, Concurrency, Mutual Exclusion and Synchronization, Deadlock

2.2. Scheduling

2.3. Memory Management, Kernal

2.4. Input Output and Files: I/O devices and its organization, Principles of I/O software and hardware, Disks, Files and directories organization, File System Implementation

2.5. Distributed Systems: Distributed Message passing, RPC, Client/Server Computing, Clusters

2.6. Security : Authentication and Access Authorization, System Flaws and Attacks, Trusted system

**3. Computer Networks**

3.1. Protocol stack, OSI and TCP/IP models

3.2. Link Layer: services, error detection and correction, multiple access protocols, LAN addressing and ARP (Address Resolution Protocol), Ethernet, CSMA/CD multiple access protocol, Hubs, Bridges, and Switches, Wireless LANs, PPP (Point to Point Protocol), Wide area protocols

3.3. Network Layer :services, datagram and virtual circuits, routing principles and algorithms, Internet Protocol (IP), IP addressing, IP transport, fragmentation and assembly, ICMP (Internet Control Message Protocol), routing on the internet, RIP (Routing Information Protocol), OSPF (Open Shortest Path First), router internals, IPv6

3.4. Transport Layer: principles, multiplexing and de-multiplexing, UDP, TCP, flow control, principles of congestion control, TCP congestion control

3.5. Application Layer : Web and Web caching, FTP (File Transfer Protocol), Electronic mail, DNS (Domain Name Service), socket programming

## Section B - 30 Marks

**4. Data Structure and Algorithms**

4.1. General concepts : Abstract data Type, Time and space analysis of algorithms, Big oh and theta notations, Average, best and worst case analysis

4.2. Linear data structures

4.3. Trees: General and binary trees, Representations and traversals, Binary search trees, balancing trees, AVL trees, 2-3 trees, red-black trees, self-adjusting trees, Splay Trees

4.4. Algorithm design techniques: Greedy methods, Priority queue search, Exhaustive search, Divide and conquer, Dynamic programming, Recursion

4.5. Hashing

4.6. Graphs and digraphs

4.7. Sorting

**5. Database Management System**

5.1. The relational model, ER model

5.2. Structured Query Language (SQL)

5.3. Functional dependency, normalization and relational database design

5.4. Transaction Management and Concurrency Control: Concurrent execution of the user programs, transactions, Concurrency control techniques

5.5. Crash Recovery : types of failure, Recovery techniques

5.6. Query Processing and Optimization

5.7. Indexing : Hash based indexing, Tree based indexing

5.8. Distributed Database Systems and Object oriented database system

5.9. Data Mining and Data Warehousing

5.10. Database Security

**6. Software Engineering**

6.1. Software process: The software lifecycle models, risk-driven approaches

6.2. Software project management: Relationship to lifecycle, project planning, project control, project organization, risk management, cost models, configuration management, version control, quality assurance, metrics

6.3. Software requirements: Requirements analysis, requirements solicitation, analysis tools, requirements definition, requirements specification, static and dynamic specifications, requirements review, feasibility analysis

6.4. Software design: Design for reuse and with reuse, design for change, design notations, design evaluation and validation

6.5. Implementation: Programming standards and procedures, modularity, data abstraction, static analysis, unit testing, integration testing, regression testing, tools for testing, fault tolerance

6.6. Maintenance: The maintenance problem, the nature of maintenance, planning for maintenance

6.7. SE issues: Formal methods, tools and environments for software engineering, role of programming paradigm, process maturity and Improvement, ISO standards, SEI-CMM, CASE tools

## Section C - 40 Marks

**7. Structured and Object Oriented Programming**

7.1. Concept of Procedural Programming, Structural Programming, Object-Oriented Programming

7.2. Data types, Abstract Data Types (ADT)

7.3. Operators, variables and assignments

7.4. Control structures

7.5. Procedure/function

7.6. Class definitions, encapsulation, inheritance, object composition, polymorphism

Concept of C programming, C++ Programming

**8. MIS and Web Engineering**

8.1. Information Systems and Decision Making; Knowledge Management.

8.2. Strategic use of Information Technology; Work Process Redesign (Reengineering) with Information Technology; Enterprise Resources Planning Systems

8.3. Information Systems Security, Information Privacy, and Global Information Technology issues

8.4. Web Technology: Internet, Intranet, WWW, Static and Dynamic Web Page; Web Clients; Web Servers; Client Server Architecture: Single Tier, Two-Tier, Multi-Tier; HTTP: HTTP Request and Response; URL, Client Side Scripting, Server Side Scripting, Web 2.0

8.5. Hyper Text Markup Language: Introduction to HTML; Elements of HTML Document; HTML Elements and HTML Attributes, Headings, Paragraph, Division, Formatting; Image element; Anchors; Lists; Tables; Frames; Forms

8.6. Client Side Scripting with JavaScript

8.7. Basics of AJAX; Introduction to XML and its application

**9. Theory of Computation**

9.1. DFA and NDFA, regular expressions, regular grammars

9.2. CFGs, Parsing and ambiguity, Pushdown automata, NPDAs & CFGs

9.3. Turing machines

9.4. Recursively enumerable languages Unrestricted grammars

9.5. The Chomsky hierarchy, Church's Thesis

9.6. Complexity Theory, P and NP

**10. Artificial Intelligence**

10.1. Search: Uninformed search techniques- depth first search, breadth first search, depth limit search, and search strategy comparison; Informed search techniques-hill climbing, best first search, greedy search

10.2. Architecture of Expert system, Knowledge acquisition, induction, Development of expert system

10.3. Learning: Supervised Learning; Unsupervised Learning; Semi-supervised Learning; Reinforcement Learning; Neural Networks; Support Vector Machine (SVM); Self Organizing Map (SOM); Genetic Algorithms; Clustering; Decision Trees.

10.4. Automated reasoning: FOPL; Knowledge Representation Languages. Basic Concepts of Natural Language Processing (NLP)

10.5. Game Playing

**11. Distributed System:** Introduction of distributed system, Models of distributed system, Heterogeneity in distributed system, middleware, Objects in Distributed system, the CORBA approach, CORBA services, Time in Distributed system, Mutual exclusion in Distributed system, Algorithm for mutual Exclusion, Distributed election.

**12.** Principles of Electronics Communications: Block Diagram of analog/digital communication system, Analog and Digital modulation techniques, Fundamentals of Error Detection and Correction, Performance evaluation of analog and digital communication systems

**13.** Professional Practices: Ethics and professionalism: code of conduct and guidelines for professional engineering practices, Nepal Engineering Council Act 2055 and regulations, 2056, Relation with clients, contractor and fellow professionals, Public procurement practices for works, goods and services and its importance.

**14. Advanced Topics in IT**

14.1. Parallel and distributed system

14.2. High speed networks

14.3. E-commerce

14.4. Software Project Management

14.5. Cloud Computing

14.6. Data Science

14.7. IOT

## द्वितीयपत्रको प्रश्न तालिका

| खण्ड | A | B | C |
|---|---|---|---|
| छोटो प्रश्नसंख्या | 2 | 2 | 4 |
| लामो प्रश्नसंख्या | 2 | 2 | 2 |

## सामूहिक परीक्षण

सामुहिक परीक्षण व्यक्तित्व परीक्षणको एक अंश हो । प्रदेश निजामती सेवाको क्षेत्र विस्तार तथा कार्य पद्धति परिवर्तन समेत भैरहेको सन्दर्भमा कर्णाली प्रदेश सरकारको नीति, योजना, कार्यक्रम लगायत शासन व्यवस्था सम्वन्धी समसामयिक विषय माथि विचारविमर्श –, छलफल गरी तिनको अझै बढी प्रभावकारी तथा कार्यान्वयन योग्य समाधान पहिल्याउने सम्बन्धमा उम्मेदवारहरुको क्षमता पहिचान गर्नु यस परीक्षणको मूल मर्म हो । यसको लागि छलफल, विचारविमर्श गरी परिस्थिति बुझ्न सक्ने –, निर्णय दिने, जनतालाई क्रियाशील बनाउने, चित्त बुझाउने, निर्धारित लक्ष्य अनुसार काम गर्ने/गराउने, जस्ता कामका लागि लेखन क्षमताका साथसाथै समस्यालाई यथार्थपरक ढंगले पहिचान गर्नसक्ने, वाकपटुता, शिष्टता, तर्कशक्तिको पनि आवश्यकता पर्दछ ।

त्यसैले यस परीक्षणमा उम्मेदवारहरुको वौद्धिक क्षमता, संचार सीप, समूह गतिशिलता, व्यवहार, व्यक्तित्व, मनोवृति, क्रियाशीलता, निर्णयशक्ति, समस्या समाधान क्षमता, नेतृत्व क्षमता, समय व्यवस्थापन तथा व्यक्तित्वमा भएका अन्य गुणहरुको आंकलन अर्थात परीक्षण र मूल्याङ्कन गर्नको लागि उम्मेदवारहरुलाई कुनै समसामयिक विषय/सवाल/समस्यामा सामूहिक छलफल गरी समस्या समाधान केन्द्रीत प्रभावकारी र कार्यान्वयन योग्य समाधान निकाल्न दिइन्छ ।

यस प्रयोजनको लागि गरिने परीक्षण १० पूर्णाङ्क र ३० मिनेट अवधिको हुनेछ जुन नेताविहिन सामूहिक छलफलको रुपमा अवलम्वन गरिनेछ । दिइएको प्रश्न वा Topic का विषयमा पालैपालोसँग निर्दिष्ट समयभित्र समूहवीच छलफल गर्दै प्रत्येक उम्मेदवारले व्यक्तिगत प्रस्तुति गर्नुपर्नेछ । यस परीक्षणमा मूल्याङ्कनको लागि देहाय अनुसार कम्तीमा तीन जनाको समिति रहनेछ ।

| | |
|---|---|
| आयोगका अध्यक्ष वा अध्यक्षले तोकेको सदस्य | –अध्यक्ष |
| आयोगका सदस्य | –सदस्य |
| मनोविज्ञानवेत्ता | –सदस्य |
| दक्ष/विज्ञ (१ जना) | –सदस्य |