

लोक सेवा आयोग

नेपाल विविध सेवा, राजपत्राङ्कित तृतीय श्रेणी, रेखा विशेषज्ञ पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :-	लिखित परीक्षा (Written Examination)	पूर्णाङ्क :- २००
द्वितीय चरण :-	(क) सामूहिक परीक्षण (Group Test)	पूर्णाङ्क :- १०
	(ख) अन्तर्वार्ता (Interview)	पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

पत्र	विषय	खण्ड	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या × अङ्क	समय
प्रथम	General Subject	Part I: General Awareness & General Reasoning Test	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न × १ अङ्क
		Part II: General Technical Subject					५० प्रश्न × १ अङ्क
द्वितीय	Technical Subject		१००	४०	विषयगत (Subjective)	छोटो उत्तर लामो उत्तर	४ प्रश्न × ५ अङ्क ८ प्रश्न × १० अङ्क

द्वितीय चरण : सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ४०

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

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथमपत्र र द्वितीयपत्रको लिखित परीक्षा छुट्टाछुट्टै 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 प्रश्नहरूको हकमा तोकिएको अंकको 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 ।
- द्वितीय पत्रमा (विषयगत प्रश्न हुनेका हकमा) प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोही खण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- 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 ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- यस भन्दा अगाडि लागू भएका माथि उल्लेखित सेवा, समूहको पाठ्यक्रम खारेज गरिएको छ ।
- पाठ्यक्रम लागू मिति : - २०८०/०७/२०

प्रथम पत्र (Paper I): General Subject

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

1. **General Awareness 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, and livelihood & lifestyle of people
 - 1.4 Notable events and personalities, social, cultural and economic conditions in modern history of Nepal
 - 1.5 Current periodical plan of 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 (From Part 1 to 5 and Schedules)
 - 1.9 Governance system and Government (Federal, Provincial and Local)
 - 1.10 Provisions of civil service act and regulation relating to constitution of civil service, organisational structure, posts of service, fulfillment of vacancy and code of conduct
 - 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, directing, controlling, coordinating, decision making, motivation and leadership
 - 1.15 Government planning, budgeting and accounting system
 - 1.16 Major events and current affairs of national and international importance
2. **General Reasoning Test** (25 ×1 Mark = 25 Marks)
 - 2.1 **Logical Reasoning** (9×1 Mark = 9 Marks)

Verbal Ability, Alphanumeric Series, Reasoning Analogies, Classification, Coding-Decoding, Order & Ranking, Distance & Directions, Analytical and Logical Reasoning, Assertion and Reason, Statement and Conclusion, Input-Output, Venn- diagram
 - 2.2 **Numerical Reasoning** (8×1 Mark = 8 Marks)

Arithmetic Series, Analogy, Classification, Arithmetical Reasoning, Fraction. Percentage, Ratio, Average, Profit & Loss, Time & Work, Date & Calender, Data Sufficiency, Data Interpretation & Data Verification
 - 2.3 **Spatial Reasoning** (8×1 Mark = 8 Marks)

Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion, Embedded Images, Image Formation & Analysis, Mirror and Water Images, Cubes and Dices, Paper Folding & Cutting

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

Unit 1 (20%)

- 1.1 Forensic Science with Reference to:** Factors of Forensic sciences, Definitions, History, Development and Scope with reference to:
- 1.1.1 Definitions
 - 1.1.2 Fingerprints
 - 1.1.3 Handwriting
- 1.2 History of Fingerprints Science with special reference to the contribution of following Scientists:**
- 1.2.1 Dr. Nehemiah Grew, Mercilio Malphini
 - 1.2.2 Thomas Bewick, Professor Jan Evangelist Purkinje
 - 1.2.3 Professor Juan Vucetich, Sir William Herchel,
 - 1.2.4 Dr. Henry Fauldas, Sir Francis Galton
 - 1.2.5 Sir Edward Richard Henry, Master Durga Prasad Upreti and Recent Nepalese Experts
- 1.3. Biological Significance of skin Patterns:**
- 1.3.1 Basal or Generating layer
 - 1.3.2 Sweat pores, Ducts and nerves
 - 1.3.3 EPIDERMIS or Surface Layers
 - 1.3.3.1 Corneous Layer
 - 1.3.3.2 Transparent Layer
 - 1.3.3.3 Granular Layer
 - 1.3.3.4 Malpighinian Layer
 - 1.3.3.5 Generating Layer
 - 1.3.4 DERMIS or CORIUM layer
- 1.4 Definitions and their identifying characteristics of:**
- 1.4.1 Friction skin, papillary ridges
 - 1.4.2 Furrow, Delta, Core, marking
 - 1.4.3 Inner and Outer terminus
 - 1.4.4 Type line, Creases and Scars, Ridge counting
 - 1.4.5 Nascent ridge, Hiatus, Roller and slab

Unit 2 (20%)

- 2.1 Galton Details and their definitions with identifying values of:**
- 2.1.1 Dots, Short ridge,
 - 2.1.2 Bifurcation or Fork, Enclosure, Change-over
 - 2.1.3 Ending and Beginning of the ridge
 - 2.1.4 Fragmentary ridge, Termination
 - 2.1.5 Hook, Continuous ridge
- 2.2 Ridges and their values for personal identification with special reference of Sir Francis Galton:**
- 2.2.1 Permanency of Persistency
 - 2.2.2 Peculiarities or Individuality or Uniqueness
- 2.3. Definitions of Impressions and their values of:**
- 2.3.1 Plain Impression and its comparison technique.
 - 2.3.2 Rolled Impression and its comparison technique.
 - 2.3.3 Partial Impression and its comparison technique.
 - 2.3.4 Blurred Impression and its comparison technique.
 - 2.3.5 Kinds of forged fingerprint and detection

2.4 Ink and its values:

- 2.4.1 Writing ink
- 2.4.2 Rubber Stamps ink
- 2.4.3 Printers ink
- 2.4.3 Litho machine ink
- 2.4.4 Carbon and oil mixed ink
- 2.4.5 Elements of good ink

2.5 Definition of patterns and their importance in personal identification system

- 2.5.1 Creases, their origin and purpose they serve scars and Creases. Subsidiary or Counter sunk ridges.
- 2.5.2 Plain and Rolled impressions and how it is taken, Reasons for taking rolled impressions
- 2.5.3 Fixed points of impressions – Delta, Core, Type of Lines.
- 2.5.4 Arch – Plain Arch, Tented Arch, Exceptional Arch.
- 2.5.5 Loop-Ulner Loop, Radial Loop, Nutant Loop.
- 2.5.6 Whorls – Concentric Circular, Spiral, Bouble, Spiral Almond Shape.
- 2.5.7 Composite – Central Pocket Loop, Lateral Pocket Loop and Accidentals

2.6 Personal Identification Systems

- 2.6.1 Bertillon's Measurement Theory
- 2.6.2 Galton's Fingerprint Theory
- 2.6.3 Poroscopy.

2.7 Theories of Scientific Identification Methods (ACE_V Method)

- 2.7.1 Analysis
- 2.7.2 Comparison
- 2.7.3 Evaluation
- 2.7.4 Verification

Unit 3 (20%)

3.1 Comparison of fingerprints:

- 3.1.1 Patterns
- 3.1.2 Core and delta or inner and outer terminus
- 3.1.3 Minutiae and their relative position
- 3.1.4 Marking points in enlarged photographs
- 3.1.5 Counting ridges between two points.
- 3.1.6 Determining necessary identical points and its reason for positive opinion.
- 3.1.7 Number of Numerical points for Identification with reference of United Kingdom, United States and India.

3.2 Selection of Specimen Fingerprints:

- 3.2.1 Authenticity and legally obtained.
- 3.2.2 Rolled or plain prints.
- 3.2.3 Effect of poor or blurred specimen.
- 3.2.4 Advice how to take specimens.

3.3 How to take a good significant impression:

- 3.3.1 Selection of ink.
- 3.3.2 Use of clean roller and slab
- 3.3.3 Position of fingers
- 3.3.4 Height of table and position of paper

- 3.3.5 Methods of taking impression of new born babies.
- 3.3.6 Methods of taking fingerprints of fresh and decomposed dead bodies.
- 3.3.7 Advice how to take specimens.

3.4 Foot prints or Track Marks Examination

- 3.4.1 Reliability
- 3.4.2 Causes of difficulties to comparison
- 3.4.3 Incomplete Prints or Tracks
- 3.4.4 Lack of sufficient ridge details and clearness
- 3.4.5 Advice how to take Specimen of Foot prints or Tracks
- 3.4.6 Causes of divergent opinions of experts

3.5 Various methods of Fingerprint photography, Scanning and printing Techniques with:

- 3.5.1 Under natural light
- 3.5.2 Under artificial light
- 3.5.3 Under ultra-violet light
- 3.5.4 Under oblique light
- 3.5.5 Under transparent light
- 3.5.6 Selection of suitable filters.

Unit 4 (20%)

4.1 Qualification, Duties, Reasons and Crime Investigation:

- 4.1.1 Qualification of Expert determined by the courts.
- 4.1.2 Crime investigation by latent, plastic and visible prints.
- 4.1.3 Forged, blurred and partial prints and their identification.
- 4.1.4 Duty of an expert to the courts, lawyers and the society.
- 4.1.5 Causes of divergent opinions of experts.
- 4.1.6 Reasons of "Fingerprint Science is an exact Science".
- 4.1.7 Compulsory elements of report writing

4.2 Equipments used in Fingerprint Examination:

- 4.2.1 Different powers and kinds of lenses
- 4.2.2 Fingerprints comparators
- 4.2.3 Various kinds of Microscopes
- 4.2.4 Video Spectral compactor
- 4.2.5 Laser Beam equipments
- 4.2.6 Computer and related Software
- 4.2.7 Scanner and Scanning procedures

4.3 Detection of Latent Fingerprints:

- 4.3.1 Law of Individuality and principle of Contact exchange.
- 4.3.2 Acquaintance with prints on:
 - 4.3.2.1 Dust surface
 - 4.3.2.2 Blood
 - 4.3.2.3 Paints
 - 4.3.2.4 Grease
 - 4.3.2.5 Plastic
 - 4.3.2.6 Wax
 - 4.3.2.7 Soap
 - 4.3.2.8 Glass
 - 4.3.2.9 Tile
 - 4.3.2.10 Painted woods
 - 4.3.2.11 Plain papers

Unit 5 (20%)

5.1 Various Methods of Developments of Latent Prints

- 5.1.1 Use of powder of different colors
- 5.1.2 Developments by Chemical Methods
- 5.1.3 Iodine fuming
- 5.1.4 Ninhydrin
- 5.1.5 Silver nitrate
- 5.1.6 Preservation of developed prints

5.2 Legal provisions:

- 5.2.1 लिफा र यसका परिचयामक चिन्हहरु
- 5.2.2 प्रमाण ऐन, २०३१
- 5.2.3 मुलुकी देवानी संहिता, अदालती बन्दोवस्त सम्बन्धी व्यवस्था
- 5.2.4 मुलुकी देवानी संहिता, काजग जाँच सम्बन्धी व्यवस्था
- 5.2.5 मुलुकी देवानी संहिताको किर्तेको कागज सम्बन्धी व्यवस्था
- 5.2.6 औलाछापसंग सम्बन्धित सर्वोच्च अदालतका फैसलाहरु (सर्वोच्च अदालतबाट नेपाल कानून पत्रिकामा प्रकाशित मात्र)

5.3 Report writing and Answer in cross examination with:

- 5.3.1 Techniques of report writing
- 5.3.2 Necessary elements of a good report
- 5.3.3 Facts and their explanations
- 5.3.4 Reasons
- 5.3.5 Opinion with Demonstrative way