

प्रदेश लोक सेवा आयोग

प्रदेश नं. १, विराटनगर

स्थानीय सरकारी सेवा अन्तर्गत प्राविधिक तर्फ इञ्जिनियरिङ्ग सेवा, सिभिल समूह, सहायकस्तर चौथो तह
(असिष्टेण्ट सब-इञ्जिनियर) पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

पाठ्यक्रमलाई निम्नानुसार विभाजन गरिएको छः

प्रथम चरणः लिखित परीक्षा

पूर्णाङ्कः १००

द्वितीय चरणः अन्तर्वार्ता

पूर्णाङ्कः २०

परीक्षा योजना (Examination Scheme)

प्रथम चरणः लिखित परीक्षा (Written Examination)

बिषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या अङ्कभार	समय
सेवा सम्बन्धी	१००	४०	बस्तुगत बहुवैकल्पिक (Multiple choice)	५० प्रश्न X २ अङ्क=१००	४५ मिनेट

द्वितीय चरणः अन्तर्वार्ता

बिषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	२०	मौखिक

द्रष्टव्यः

१. यो पाठ्यक्रम योजनालाई लिखित परीक्षा र अन्तर्वार्ता गरी दुई चरणमा विभाजन गरिएको छ।
२. प्रश्नपत्र अङ्ग्रेजी भाषामा हुनेछ।
३. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ।
४. लिखित परीक्षामा निम्नानुसार प्रश्नहरू सोधिनेछ।

पाठ्यक्रमका एकाइ	१	२	३	४	५	६	७	८
प्रश्न संख्या	६	६	६	८	८	३	१०	३

५. बस्तुगत बहुवैकल्पिक (Multiple choice) प्रश्नहरूको उत्तर सही दिएमा प्रत्येक उत्तर बापत २ (दुई) अङ्क प्रदान गरिनेछ भने 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।
६. बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै पनि प्रकारको क्यालकुलेटर (Calculator), मोबाइल फोन वा अन्य विद्युतीय उपकरण प्रयोग गर्न पाइने छैन।
७. यस पाठ्यक्रम योजना अन्तर्गतका पत्र तथा विषयका विषयवस्तुमा जे सुकै 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 रहेका लाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ।
८. प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ।

९. लिखित परीक्षा र अन्तर्वार्ताको कुल अङ्क योगका आधारमा परीक्षाफल प्रकाशित गरिनेछ।
१०. पाठ्यक्रम लागू मिति: २०७७/१०/११

प्रदेश लोक सेवा आयोग
प्रदेश नं. १, विराटनगर
स्थानीय सरकारी सेवा अन्तर्गत प्राविधिक तर्फ इञ्जिनियरिङ्ग सेवा, सिभिल समूह, चौथो तह (असिष्टेण्ट
सब-इञ्जिनियर) पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

पत्र/ विषय :- सेवा सम्बन्धी

1. Engineering Drawing

- 1.1 Unit, Dimension and their conversion with special reference to SI system
- 1.2 Elementary idea of drawing (object); Building drawings
- 1.3 Drafting techniques and methods in common practice
 - 1.3.1 Different types of lines and effects
 - 1.3.2 Vertical line, horizontal line & inclined line (thick, thin, dark, light)
 - 1.3.3 Representation of different materials: stone, timber, glass, metal, brick, concrete, sand, earth, tile, plaster
 - 1.3.4 Dimensioning: element to element, centre to centre and overall dimensioning
- 1.4 Measured Drawing
 - 1.4.1 Methods of measurement of horizontal and vertical dimensions
 - 1.4.2 Sectional measurements
 - 1.4.3 Scales: choice, use and conversion
- 1.5 Working Drawing
 - 1.5.1 Significance of detailing in terms of accuracy of estimation, bill of quantities and construction supervision Structural working drawings and structural detail: column, beam, slab, foundation, and other structural elements

2. Estimating, Costing and Supervision

- 2.1 Purpose of estimating
- 2.2 Methods of estimate
- 2.3 Types of estimates (preliminary estimate, approximate quantity estimate, detailed estimate, revised estimate)
- 2.4 Standard estimate formats of government of Nepal
- 2.5 Rate analysis and Norms
- 2.6 Estimating items of construction works
- 2.7 Estimate of civil works, and site development work
- 2.8 Specifications: purpose, types and necessity
- 2.9 Concept and purpose of property valuation
- 2.10 Supervision

3. Engineering Survey

- 3.1 Basics of surveying, its importance and types
- 3.2 Scale, plans, maps
- 3.3 Conventional signs and system of field booking of surveying
- 3.4 Basics of Chain, Compass, Plane table, Levelling and Theodolite

4. Construction Materials

- 4.1 Rocks/stone: types of rocks, their characteristics & properties of good stone
- 4.2 Aggregates (fine & coarse)
- 4.3 Cement: Different types of cement and its properties; Admixtures
- 4.4 Metal and alloys
- 4.5 Brick: types of bricks & sizes of bricks available in Nepal
- 4.6 Lime and Surkhi: types, properties and its uses
- 4.7 Mortar: types, properties and its uses along with proportions
- 4.8 Paints and varnishes: constituents, types and its uses
- 4.9 Floor finishes-punning, tiles, mosaic, clay, concrete, vinyl, marble, flagstones,
- 4.10 Timber and Wood
- 4.11 Wall finishes: plasters (cement, lime and mud), punning and cladding (wooden, stone, tiles, marbles)
- 4.12 Roofing materials
- 4.13 Quality control including different Laboratory tests

5. Construction Technology

- 5.1 Description and Objectives
- 5.2 Types of construction works
 - 5.2.1 Masonry works; Concrete works; Flooring works; Finishing works
 - 5.2.2 Construction of building components
 - 5.2.3 Earthquake Resistant Building Construction
 - 5.2.4 Temporary constructions
 - 5.2.5 Rural technology and alternative energy
- 5.3 Concrete technology and management
 - 5.3.1 Constituents of cement concrete (cement, aggregate, water, admixture)
 - 5.3.2 Grading of aggregates
 - 5.3.3 Water cement ratio
 - 5.3.4 Workability and strength of concrete
 - 5.3.5 Concrete mix, laying, pouring, and compaction
 - 5.3.6 Reinforcement laying
 - 5.3.7 Formwork
 - 5.3.8 Curing of concrete
 - 5.3.9 Storage and management of construction material
 - 5.3.10 Record keeping at construction site (daily work done, manpower mobilized, material storage)
 - 5.3.11 Construction safety
 - 5.3.12 Scheduling tool (bar chart) 6.

6. Building Services

- 6.1 Water supply, Types of storage (underground, overhead), types of water supply pipes and its fitting
- 6.2 Septic tank, soak pit, vents, manhole, types of sewerage pipes

- 6.3 General principle of electrical installation and distribution, types of wiring systems (surface, conceal), safety precautions (earthing, lightening arrestors)
- 6.4 Lighting: General principle of lighting & Lighting fixtures

7. Local Infrastructures

- 7.1 Roads and Bridges: Process of road construction, layers of road structure and different types of pavement; Development of road network in Nepal; Layout and construction of trails, rural roads and motorable roads; Cross drains (bridges, culverts, causeways) and Side drains for roads; Retaining walls; Road signs and Traffic signals;
- 7.2 Irrigation: Need for irrigation; Methods of irrigation; Head works and canal network; operation and maintenance of irrigation system and River training works
- 7.3 Water Supply: Community based water supply system; Selection of water source with adequate quantity; Water demand analysis, operation and maintenance of water supply

8. General information about legislations

- 8.1 The Constitution of Nepal (From Parts 1, 2, 3, 17 & 18, and Schedules))
- 8.2 Local Government Operation Act, 2074 (related to local infrastructures development)

Model Questions

- Pick up the monomineralic rock from the following
A. Quartz
B. Magnesite
C. Pure gypsum
D. Granite
- The most popular material for roofing purpose in mountainous region of Nepal is
A. Mud
B. Hay
C. Slate
D. CGI Sheets
- Lime (CaO) content in ordinary Portland cement is
A. 59 to 64%
B. 3 to 6%
C. 19 to 24%
D. 1 to 4%
- Shingle is
A. Crushed Granite
B. Water bound pebbles
C. Decomposed laterite
D. Air weathered rocks
- The increase in volume of dry sand when water is added is called;
A. honey combing
B. bulking
C. segregation
D. bleeding

6. What is the total cost of plastering of 4 walls of a room with length 10m, breadth 5m and height 2.5m at the rate of Rs 100 per sq. m.?
- A. Rs 75
B. Rs 7,500
C. Rs 750
D. Rs 75,000
7. What is the value of each angle of a regular hexagon?
- A. 120
B. 720
C. 135
D. 108
8. The areas of two subsequent sizes of drawing sheet are in the ratio of
- A. 1:5
B. 1:2
C. 1:4
D. 1:10
9. The longest of survey line is called
- A. Base line
B. Chain line
C. Tie line
D. Horizontal line