लम्कीचुहा नगरपालिका भल्का, कैलाली

स्थानीय तह तर्फको असिस्टेन्ट सब ईन्जिनियर (सहायक ल्याब टेक्निसियन) चौथो तह सरह पदको लिखित परीक्षाको पाठ्यक्रम एवं परीक्षा योजना

पाठ्यक्रमको रुप रेखा : यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा लिईने छ।

क. प्रथम चरण :- लिखित परीक्षा (Written Examination) पूर्णाङ्क :- १००

ख. :- अन्तर्वार्ता (Interview) पूर्णाङ्क :- २५

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा योजना (Examination Scheme)

विषय	पूर्णाङ्क	उतीर्णाङ्क	परीक्षा प्रणाली	प्रश्न सङ्ख्या * अङ्कभार	समय
सेवा सम्बन्धी	१००	४०	वस्तुगत बहुवैकल्पिक (Multiple Choice)	५० प्रश्न *२ अङ्क = १००	४५ मिनेट

द्वितीय चरण :- अन्तर्वार्ता (Interview)

विषय	पूर्णाङ्क	परीक्षा प्रणाली
सेवा सम्बन्धी	२५	मौखिक

द्रस्टव्य :

१ लिखित परीक्षाको माध्यम भाषा नेपाली वा अङ्ग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ।

पाठ्यक्रम इकाई	१	२	३	४	५	६	७	८
प्रश्न सङ्ख्या	५	७	६	७	८	५	८	४

२ यथासम्भव पाठ्यक्रमका सबै इकाईबाट प्रश्न सोधिने छन।

३ लिखित परीक्षामा गल्ति गरेको प्रश्नोत्तरका लागि कुनै अङ्क कट्टा गरिने छैन।

४ यस पाठ्यक्रममा जेसुकै लेखिएको भएतापनि पाठ्यक्रममा परेका ऐन, नियमहरु, परीक्षाको मितिभन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ।

५ प्रथम चरणको लिखित परिक्षाबाट छनौट भएका उम्मेद्वारलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ।

६ पाठ्यक्रम लागु हुने मिति :- २०८०।०८।१२

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)

लम्कीचुहा नगरपालिका नगर कार्यपालिकाको कार्यालय भल्का, कैलाली सुदूरपश्चिम प्रदेश, नेपाल

माधवे कुमार खैसी
नि. प्रमुख प्रशासकिय अधिकृत

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

1.5.2 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 the 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 Total station and GPS

3.5 Levelling, Classification of leveling works, Methods of leveling, Levelling instruments and accessories, Principles of leveling

3.6 Setting Out: Small buildings

4. Construction Materials

लम्कीचुहा नगरपालिका
नगर कार्यपालिकाको कार्यालय
भल्का, कैलाली
सुदूरपश्चिम प्रदेश, नेपाल

नि. प्रमुख प्रशासकिय अधिकृत

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, wooden boarding, parquet
4.10 Wall finishes: plasters (cement, lime, and mud), punning, and cladding (wooden, stone, tiles, marbles)
4.11 Roofing materials
4.12 Use of local construction materials

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 Foundation and bearing capacity
- 5.3.1 Types of foundation: shallow, deep
- 5.3.2 Safe bearing capacity of soil and its improvement
- 5.3.3 Methods of excavation, shoring and dewatering
- 5.3.4 Stone/brick masonry foundation
- 5.3.5 Isolated, combined and raft foundation
- 5.3.6 Strap beam, foundation beam and DPC beam

5.4 Concrete technology and management
- 5.4.1 Constituents of cement concrete (cement, aggregate, water, admixture)
- 5.4.2 Grading of aggregates
- 5.4.3 Water cement ratio
- 5.4.4 Workability and strength of concrete

लम्कीचुहा नगरपालिका नगर कार्यपालिकाको कार्यालय भल्का, कैलाली सुदूरपश्चिम प्रदेश, नेपाल

माधव कुमार जोशी
प्रमुख प्रशासकिय अधिकृत

5.4.5 Concrete mix, laying, pouring, and compaction
5.4.6 Reinforcement laying
5.4.7 Formwork
5.4.8 Curing of concrete
5.4.9 Storage and management of construction material
5.4.10 Record keeping at aconstruction site (daily work done, manpower mobilized, material storage)
5.4.11 Construction safety
5.4.12 Scheduling tool (bar chart)

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. Laboratory Testing

7. **Earth work: Laboratory Testing procedure and equipment for**
7.1 Gradation, Identification
7.2 Proctor compaction (Optimum moisture content & maximum dry density)
7.3 Plasticity Index
7.4 Dynamic cone penetration
7.5 California Bearing Ratio (CBR)
7.6 Specific gravity
8. **Sub-base/base: Laboratory Testing procedure and equipments for**
8.1 Gradation, Material identification
8.2 Compaction (Maximum dry density & Optimum moisture content)
8.3 California Bearing Ratio (CBR)
8.4 Compaction-Field density test by sand replacement method/core cutter method
8.5 Los-Angeles abrasion
8.6 Aggregate impact value
8.7 Aggregate crushing value

लम्कीचुहा नगरपालिका नगर कार्यपालिकाको कार्यालय भल्का, कैलाली सुदूरपश्चिम प्रदेश, नेपाल

माधव कुमार जैसी
नि. प्रमुख प्रशासकिय अधिकृत