

स्थानीय तह अन्तर्गतका प्राविधिक तर्फ इन्जिनियरिङ्ग सेवा, सिभिल समूह, चौथो तह, असिष्टेण्ट सव-इन्जिनियर

पदको प्रतियोगितात्मक परीक्षाको लागि पाठ्यक्रम

पाठ्यक्रमको रूपरेखा – यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छ :

प्रथम चरण :- लिखित परीक्षा

पूर्णाङ्क :-४०

द्वितीय चरण :-प्रयोगात्मक परीक्षा

पूर्णाङ्क :-५०

तृतीय चरण- अन्तर्वार्ता, शैक्षिक योग्यता, अन्य

पूर्णाङ्क :-६०

प्रथम चरण –लिखित परीक्षा योजना(Examination Scheme)

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X	समय
सेवा सम्बन्धी	४०	१६	बस्तुगत बहुवैकल्पिक (Multiple choice)	४० प्रश्न १ अङ्क	४० मिनेट

द्वितीय चरण-प्रयोगात्मक परीक्षा

विषय	पूर्णाङ्क	परीक्षा प्रणाली	समय
सेवा सम्बन्धी	५०	Excel तथा Auto Cad test	६० मिनेट

तृतीय चरण- अन्तर्वार्ता, शैक्षिक योग्यता, अन्य

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	६०	मौखिक / कागजात

अ.सव-ईन्जिनियर

सि.नं.	किसिम	प्राप्ताङ्क	कूल अंक	कैफियत
१	लिखित परीक्षा		४०	
२	प्रयोगात्मक परीक्षा		५०	
३	अन्तर्वार्ता		२०	
४	कार्य अनुभव २ वर्ष भएमा कार्य अनुभव ३ वर्ष भएमा कार्य अनुभव ४ वर्ष भएमा कार्य अनुभव ५ वर्ष वा सो भन्दा बढी भएमा	४ ६ ८ १०	१०	
५	शैक्षिक योग्यता		२०	
	सम्बन्धित न्यूनतम शैक्षिक योग्यता भन्दा दुई तह माथिल्लो शैक्षिक योग्यता :	२०		
	सम्बन्धित न्यूनतम शैक्षिक योग्यता भन्दा एक तह माथिल्लो शैक्षिक योग्यता :	१७		
	सम्बन्धित न्यूनतम शैक्षिक योग्यता वापत विशिष्ट श्रेणी भएमा	१४		
	प्रथम श्रेणी भएमा	१३		
	द्वितीय श्रेणी भएमा	१२		
	तृतीय श्रेणी भएमा	११		
६	स्थानीय वासिन्दाको लागि		१०	
	तिलोत्तमा नगरपालिकाको स्थानीय	१०		
	जिल्ला भित्र	७		
	प्रदेश भित्र	५		
	जम्मा		१५०	

तिलोत्तमा नगरपालिका

स्थानीय तह अन्तर्गतका प्रविधिक तर्फइञ्जिनियरिङ्ग सेवा, सिभिल समूह, चौथो तह, असिष्टेड स व इञ्जिनियर

पदको प्रतियोगितात्मक परीक्षाको लागि 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
 - 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 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, wooden boarding, parquet

4.10 Wall finishes : plasters (cement, lime and mud), punning and cladding (wooden, stone, tiles, marbles)

4.11 Roofing materials

5.5. Construction Technology

6.5.1 Description and Objectives

7.5.2 Types of construction works

8.5.2.1 Masonry works; Concrete works; Flooring works; Finishing works

9.5.2.2 Construction of building components

10.5.2.3 Earthquake Resistant Building Construction

11.5.2.4 Temporary constructions

12.5.2.5 Rural technology and alternative energy

तिलोत्तमा नगरपालिका

स्थानीय तह अन्तर्गत का प्रविधिक तर्फ इञ्जिनियरिङ्ग सेवा, सिभिल समूह, चौथो तह, असिष्टेड स व इञ्जिनियर

पदको प्रतियोगितात्मक परीक्षाको लागि पाठ्यक्रम

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. 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, lightning arrestors)

6.4 Lighting : General principle of lighting & Lighting fixtures

7. Local Infrastructures

7.1 **Roads and Bridges** : Types of roads and bridges; 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; and River training works

7.2 **Irrigation** : Need for irrigation; Methods of irrigation; Head works and canal network; operation and maintenance of irrigation system

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