

माथागढी गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय  
झडेवा, पाल्पा



नेपाल इन्जिनियरिङ सेवा, सिभिल समूह चौथो तह, असिस्टेन्ट सब-इन्जिनियर पदको लागि प्रतियोगितात्मक परीक्षाको  
पाठ्यक्रम

पाठ्यक्रमको रूपरेखा:— यस पाठ्यक्रमको आधारमा निम्नानुसार चरणमा परीक्षा लिइने छः

लिखित परीक्षा

पूर्णाङ्क:— १००

अन्तर्वार्ता

पूर्णाङ्क:— २०

प्रथम चरण:- लिखित परीक्षा योजना (Examination Scheme)

विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्क भार	समय
सेवा सम्बन्धी	१००	४०	वस्तुगत: बहुवैकल्पिक (Multiple Choice)	७० प्रश्न X १ अङ्क = ७०	१ घण्टा ३० मिनेट
			विषयगत: छोटो उत्तर (Short Answers)	६ प्रश्न X ५ अङ्क = ३०	

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	२०	मौखिक

द्रष्टव्यः

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनसक्नेछ ।
- लिखित परीक्षाको वस्तुगत र विषयगत प्रश्नहरूको लागि छुट्टा छुट्टै उत्तरपुस्तिका परीक्षा सुरु हुनु अगावै दिइनेछ । परीक्षार्थीले वस्तुगत र विषयगत प्रश्नहरूको उत्तर सम्बन्धित उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- पाठ्यक्रमका एकाईबाट निम्नानुसार प्रश्नहरू सोधिनेछन् ।

एकाई	१	२	३	४	५	६	७	८	९	१०
वस्तुगत	७	८	७	१०	१०	७	७	७	६	१
विषयगत	१			१	१		१	१	१	

- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको उत्तर सही दिएका प्रत्येक सही उत्तर बापत १ (एक) 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 ।
- यस पाठ्यक्रममा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका ऐन, नियमहरू तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधनभई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ ।

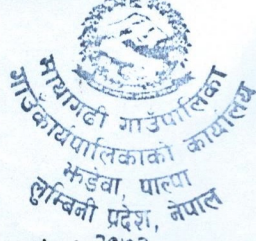
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विषय: सेवा सम्बन्धी



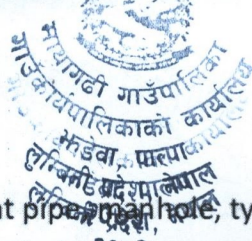
1. Engineering Drawing
  - 1.1 Unit, Dimension and their conversion with special reference to SI system
  - 1.2 Elementary idea of drawing, Building drawings
  - 1.3 Drafting techniques and methods in common practice
    - 1.3.1 Different types of lines and effects
    - 1.3.2 Vertical line, horizontal 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, Levelling and Theodolite
4. Construction Materials

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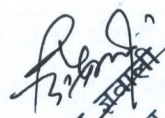


- 4.1 Rocks/stone: types of rocks, their characteristics & properties of good stone
- 4.2 Aggregates (fine & coarse)
- 4.3 Cement : Different types of cement and its properties, Admixtures
- 4.4 Metal and alloys
- 4.5 Brick: types & sizes of bricks available in Nepal
- 4.6 Lime and Surkhi: types, properties 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. 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. Building Services
  - 6.1 Water supply, Types of storage (underground, overhead), types of water supply pipes and its fitting

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- 6.2 Septic tank, soak pit, vent pipe, 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. Roads and Bridges
  - 7.1. Types of roads and bridges
  - 7.2. Development of road network in Nepal
  - 7.3. Layout and construction of trails
  - 7.4. Rural roads and motorable roads
  - 7.5. Cross drains (bridges, culverts, causeways)
  - 7.6. Side drains for roads
  - 7.7. Retaining walls
  - 7.8. Road signs and Traffic signals
  - 7.9. River training works
8. Irrigation and hydropower
  - 8.1. Need for irrigation
  - 8.2. Methods of irrigation
  - 8.3. Head works and canal network
  - 8.4. Operation and maintenance of irrigation system
  - 8.5. Micro hydro development in Karnali province
9. Water Supply and sanitation
  - 9.1. Community based water supply system
  - 9.2. Selection of water source with adequate quantity
  - 9.3. Water demand analysis
  - 9.4. operation and maintenance of water supply system
  - 9.5. Common types of latrines
10. Civil Service Act, 2049 & Regulation, 2050 (conduct, punishment and leave to which civil employee is entitled)

  
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