



लुङ्ग्री गाउँपालिका

गाउँ कार्यपालिकाको कार्यालय

वडाचौर, रोल्पा

प्राविधिक तर्फ इन्जिनियरिङ्ग सेवा, सिभिल समूह, अधिकृतस्तर छैठौँ तह इन्जिनियर पदको
प्रतियोगितात्मक परिक्षाको लागि पाठ्यक्रम

परीक्षाको किसिम:

क्र.सं.	चरण	विवरण	पूर्णाङ्क
१	प्रारम्भिक	संक्षिप्त सूची (Short Listing)	८०
२	प्रथम चरण	लिखित परीक्षा (Objectives)	१००
३	द्वितीय चरण	अन्तर्वार्ता (मौखिक)	२०
जम्मा			२००

प्रथम चरण: लिखित परीक्षा (Written Examination)

विषय	परीक्षा प्रणाली	प्रश्न संख्या र अंक	पूर्णाङ्क	उत्तीर्णाङ्क	समय
क) सामान्य ज्ञान	वस्तुगत:	५० प्रश्न × १	१००	४०	१ घण्टा ३० मिनेट
ख) सेवाको ज्ञान	बहुवैकल्पिक प्रश्न	५० प्रश्न × १			

द्रष्टव्य:

- लिखित परीक्षामा माध्यम भाषा नेपाली वा अङ्ग्रेजी वा नेपाली अङ्ग्रेजी दुबै हुन सक्नेछ।
- लिखित परीक्षामा उत्तीर्ण परिक्षार्थी मात्र अन्तर्वार्तामा सम्मिलित हुन सक्नेछन्।
- वस्तुगत बहुवैकल्पिक प्रश्नको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अंक कट्टा गरिनेछ। तर उत्तर नदिएमा त्यसबापत अंक दिइनेछैन र अंक कट्टा पनि गरिनेछैन।
- परीक्षामा कुनै प्रकारको क्याल्कुलेटर, मोबाइल वा अन्य विद्युतीय उपकरण प्रयोग गर्न पाइने छैन।
- संक्षिप्त सूची प्रकाशन लुङ्ग्री गाउँपालिका करार जनशक्ति व्यवस्थापन सम्बन्धी कार्यविधि, २०७९ बमोजिम शैक्षिक योग्यता, कार्य अनुभव, उम्मेदवारको स्थायी ठेगाना समेतको आधारमा तयार गरिनेछ।
- अन्तिम नतिजा प्रकाशनको लागि उम्मेदवारले संक्षिप्त सूची (Short List) मा प्राप्त गरेको अङ्क र लिखित परीक्षामा प्राप्त गरेको अङ्कको शतप्रतिशत तथा अन्तर्वार्तामा प्राप्त गरेको औषत अङ्कको आधारमा अन्तिम योग्यताक्रम तयार गरी सबैभन्दा बढी अङ्क प्राप्त गर्ने उम्मेदवारलाई नियुक्तिको लागि सिफारिस गरिनेछ।
- पदपूर्ती सम्बन्धी अन्य कार्यविधि छनौट समितिको निर्णयानुसार हुनेछ।



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

1. General Awareness and Contemporary Issues

- 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, organizational 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 Ability Test

2.1 Verbal Ability Test

Jumble words, Series, Analogy, Classification, Coding-Decoding, Matrix, Ranking Order Test, Direction and Distance Sense Test, Common Sense Test, Logical Reasoning, Assertion and Reason, Statement and Conclusions

2.2 Numerical Ability Test

Series, Analogy, Classification, Coding, Arithmetical reasoning/operation, Percentage, Ratio, Average, Loss & Profit, Time & Work, Data interpretation & Data verification

2.3 Non-verbal/Abstract Ability Test

Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion/Finding, Analytical Reasoning Test, Figure Formation and Analysis, Rule Detection, Water images, Mirror images, Cubes and Dice & Venn-diagram



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

1. Structure Analysis and Design

- 1.1 Stresses and strains; theory of torsion and flexure; moment of inertia
- 1.2 Analysis of beams and frames: Bending moment, shear force and deflection of beams and frames: determinate structure - Energy methods; three hinged systems, indeterminate structures- slope deflection method and moment distribution method; use of influence line diagrams for simple beams, unit load method
- 1.3 Reinforced concrete structures: Difference between working stress and limit state philosophy, analysis of RC beams and slabs in bending, shear, deflection, bond and end anchorage, Design of axially loaded columns; isolated and combined footings, introduction to pre-stressed concrete
- 1.4 Steel and timber structures: Standard and built-up sections: Design of riveted, bolted and welded connections, design of simple elements such as ties, struts, axially loaded and eccentric columns, column bases, Design principles on timber beams and columns

2. Construction Materials

- 2.1 Properties of building materials: physical, chemical, constituents, thermal etc.
- 2.2 Stones-characteristics and requirements of stones as a building materials
- 2.3 Ceramic materials: ceramic tiles, Mosaic Tile, brick types and testing etc.
- 2.4 Cementing materials: types and properties of lime and cement; cement mortar tests
- 2.5 Metals: Steel; types and properties; Aluminium
- 2.6 Timber and wood: timber trees in Nepal, types and properties of wood
- 2.7 Miscellaneous materials: Asphaltic materials (Asphalt, Bitumen and Tar); paints and varnishes; polymers
- 2.8 Soil properties and its parameters
- 2.9 Alternative materials / technology

3. Concrete Technology

- 3.1 Constituents and properties of concrete (physical and chemical)
- 3.2 Water cement ratio
- 3.3 Grade and strength of concrete, concrete mix design, testing of concrete
- 3.4 Mixing, transportation pouring and curing of concrete
- 3.5 Admixtures
- 3.6 High strength concrete
- 3.7 Pre-stressed concrete technology

4. Construction Management

- 4.1 Construction scheduling and planning: network techniques, bar charts and computer aided construction management
- 4.2 Contractual procedure and management: types of contract, tender and tender notice, preparation of bidding (tender) document, contractors pre-qualification, evaluation of tenders and selection of contractor, contract negotiation, contract acceptance, condition of contract; quotation and direct order, classifications of contractors; dispute resolution
- 4.3 Material management: procurement procedures and materials handling 4.4 Cost control, quality control and time control
- 4.5 Utility maintenance
- 4.6 Health, safety and insurance



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- 4.7 Project monitoring and evaluation
- 4.8 Quality assurance plan
- 4.9 Variation and changes
- 4.10 Use of construction equipments

5. Estimating and Costing, Valuation and Specification

- 5.1 Types of estimates and their specific uses
- 5.2 Methods of calculating quantities
- 5.3 Key components of estimating norms and rate analysis
- 5.4 Preparation of bill of quantities
- 5.5 Purpose and importance of specification
- 5.6 Purpose, principles and methods of valuation

6. Drawing Techniques

- 6.1 Drawing sheet composition and its essential components
- 6.2 Suitable scales, site plans and location plans, preliminary drawings, conceptual and working drawings
- 6.3 Theory of projection drawing: perspective, orthographic and axonometric projection; first and third angle projection
- 6.4 Drafting tools and equipments; conventions and symbols
- 6.5 Topographic, electrical, plumbing and structural drawings
- 6.6 Techniques of free sketches drawing

7. Engineering Survey

- 7.1 Introduction and basic principles
- 7.2 Linear measurements: techniques; chain, tape, ranging rods and arrows; representation of measurement and common scales; sources of errors; effect of slope and slope correction; correction for chain and tape measurements; Abney level and clinometers
- 7.3 Compass and plane table surveying: bearings; types of compass; problems and sources of errors of compass survey; principles and methods of plane tabling
- 7.4 Leveling and contouring: Principle of leveling; temporary and permanent adjustment of level; bench marks; booking methods and their reductions; longitudinal and cross sectioning; reciprocal leveling; trigonometric leveling; contour interval and characteristics of contours; methods of contouring
- 7.5 Theodolite traversing: need of traverse and its significance; computation of coordinates; adjustment of closed traverse; closing errors
- 7.6 Uses of Total Station, Electronic Distance Measuring Instruments & GPS

8. Engineering Economics

- 8.1 Benefit cost analysis, cost classification, sensitivity analysis, internal rate of return, time value of money
- 8.2 Economic equilibrium, demand, supply and production, net present value, financial and economic evaluation

9. Professional Practices and Legislations

- 9.1 Ethics and professionalism: code of conduct and guidelines for professional engineering practices
- 9.2 Nepal Engineering Council Act, 2055; and regulations, 2056



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9.3 Relation with clients, contractor and professionals

9.4 Public procurement concept and practices for works, goods and services and its importance

9.5 The Constitution of Nepal (From Part 1 to 5, 13, 14, 15, 16, 17, 18, 19 & 20; and Schedules)

9.6 Local Government Operation Act, 2074

