



प्रसौनी गाउँपालिका

गाउँ कार्यपालिकाको कार्यालय

प्रसौनी, बारा
मधेश प्रदेश, नेपाल



पत्र संख्या:- (प्रशासन)२०८०।०८१

मिति:- २०८०।११।०८

विषय: परीक्षा मिति तोकिएको सम्बन्धमा ।

उपरोक्त सम्बन्धमा यस गाउँपालिकाको कार्यालयले सवईन्जिनियर र मेस्तर करारमा लिनका लागि गरेको विज्ञापनको परीक्षा तपसिलको मिति, समय र स्थानमा संचालन हुने व्यहोरा सम्बन्धित सबैमा जानकारीको लागि अनुरोध छ ।

तपसिल:

क्र सं	पद	लिखित परीक्षा मिति	समय	स्थान	कैफियत
१	प्राविधिक सहायक (सव ईन्जिनियर)	२०८०।११।१९	१०:०० बजे	प्रसौनी गाउँपालिका	लिखित
२	मेस्तर	२०८०।११।२०	१०:०० बजे	प्रसौनी गाउँपालिका	अन्तरवार्ता

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२०८०/११/०८
सुमित कुमार सिंह
प्रमुख प्रशासकीय अधिकृत

पुनश्च: सवईन्जिनियर पदको विज्ञापनको हकमा लिखितको नतिजा प्रकाशन भए पश्चात अन्तरवार्ता र प्रयोगात्मक कार्यक्रम निर्धारण गरिने व्यहोरा सम्बन्धित सबैमा यसै सूचना मार्फत जानकारीका लागि अनुरोध छ ।

पाठ्यक्रम:- लिखित परीक्षाको लागि प्रदेश लोक सेवा आयोग, मधेश प्रदेश तथा प्रयोगात्मक परीक्षाको लागि स्थानीय तहमा प्राविधिक सहायक र रोजगार सहायक पदपूर्ति सम्बन्धी मापदण्ड, २०७८ को प्राविधिक सहायकको पाठ्यक्रमको खण्ड- २ बमोजिम हुनेछ

बोधार्थ:

श्री सूचना प्रविधि शाखा:- Website मा अपलोड गरिदिनुहुन ।

पत्र/ विषय :- सेवा सम्बन्धी

1. Surveying

1.1 General

1.1.1 Classifications

1.1.2 Principle of surveying

1.1.3 Selection of suitable method

1.1.4 Scales, plans and maps

1.1.5 Entry into survey field books and level books

1.2 Levelling

1.2.1 Methods of levelling

1.2.2 Levelling instruments and accessories

1.2.3 Principles of levelling

1.3 Plane Tabling

1.3.1 Equipments required

1.3.2 Methods of plane tabling

1.3.3 Two and three point problems

1.4 Theodolite and Traverse surveying

1.4.1 Basic difference between different theodolites

1.4.2 Temporary adjustments of theodolites

1.4.3 Fundamental lines and desired relations

1.4.4 Tacheometry: stadia method

1.4.5 Trigonometrical levelling

1.4.6 Checks in closed traverse

1.5 Contouring

1.5.1 Characteristics of contour lines

1.5.2 Method of locating contours

1.5.3 Contour plotting

1.6 Setting Out

1.6.1 Small buildings

1.6.2 Simple curves

2. Construction Materials

2.1 Stone

2.1.1 Formation and availability of stones in Nepal

2.1.2 Methods of laying and construction with various stones

2.2 Cement

2.2.1 Different cements: Ingredients, properties and manufacture

2.2.2 Storage and transport

2.2.3 Admixtures

2.3 Clay and Clay Products

2.3.1 Brick: type, manufacture, laying, bonds

2.4 Paints and Varnishes

2.4.1 Type and selection

2.4.2 Preparation techniques

2.4.3 Use

2.5 Bitumen

2.5.1 Type

2.5.2 Selection

2.5.3 Use

3. Mechanics of Materials and Structures

3.1 Mechanics of Materials

- 3.1.1 Internal effects of loading
- 3.1.2 Ultimate strength and working stress of materials

3.2 Mechanics of Beams

- 3.2.1 Relation between shear force and bending moment
- 3.2.2 Thrust, shear and bending moment diagrams for statically determinate beams under various types of loading

3.3 Simple Strut Theory

4. Hydraulics

4.1 General

- 4.1.1 Properties of fluid: mass, weight, specific weight, density, specific volume, specific gravity, viscosity
- 4.1.2 Pressure and Pascal's law

4.2 Hydro-Kinematics and Hydro-Dynamics

- 4.2.1 Energy of flowing liquid: elevation energy, Kinetic energy, potential energy, internal energy

4.3 Measurement of Discharge

- 4.3.1 Weirs and notches
- 4.3.2 Discharge formulas

4.4 Flows

- 4.4.1 Characteristics of pipe flow and open channel flow

5. Soil Mechanics

5.1 General

- 5.1.1 Soil types and classification
- 5.1.2 Three phase system of soil
- 5.1.3 Unit Weight of soil mass: bulk density, saturated density, submerged density and dry density
- 5.1.4 Interrelationship between specific gravity, void ratio, porosity, degree of saturation, percentage of air voids air content and density index

5.2 Soil Water Relation

- 5.2.1 Terzaghi's principle of effective stress
- 5.2.2 Darcy's law
- 5.2.3 Factors affecting permeability

5.3 Compaction of soil

- 5.3.1 Factors affecting soil compaction
- 5.3.2 Optimum moisture content
- 5.3.3 Relation between dry density and moisture content

5.4 Shear Strength of Soils

- 5.4.1 Mohr-Coulomb failure theory
- 5.4.2 Cohesion and angle of internal friction

5.5 Earth Pressures

- 5.5.1 Active and passive earth pressures
- 5.5.2 Lateral earth pressure theory
- 5.5.3 Rankine's earth pressure theory

5.6 Foundation Engineering

- 5.6.1 Terzaghi's general bearing capacity formulas and their application

6. Structural Design

6.1 R.C. Sections in Bending

- 6.1.1 Under reinforced, over reinforced and balanced sections
- 6.1.2 Analysis of single and double reinforced rectangular sections

6.2 Shear and Bond for R.C. Sections

- 6.2.1 Shear resistance of a R.C. section
- 6.2.2 Types of Shear reinforcement and their design
- 6.2.3 Determination of anchorage length

6.3 Axially Loaded R.C. Columns

- 6.3.1 Short and long columns
- 6.3.2 Design of a rectangular column section

6.4 Design and Drafting of R.C. Structures

- 6.4.1 Singly and doubly reinforced rectangular beams
- 6.4.2 Simple one-way and two-way slabs
- 6.4.3 Axially loaded short and long columns

7. Building Construction Technology

7.1 Foundations

- 7.1.1 Subsoil exploration
- 7.1.2 Type and suitability of different foundations: Shallow, deep
- 7.1.3 Shoring and dewatering
- 7.1.4 Design of simple brick or stone masonry foundations

7.2 Walls

- 7.2.1 Type of walls and their functions
- 7.2.2 Choosing wall thickness, Height to length relation
- 7.2.3 Use of scaffolding

7.3 Damp Proofing

- 7.3.1 Source of Dampness
- 7.3.2 Remedial measures to prevent dampness

7.4 Concrete Technology

- 7.4.1 Constituents of cement concrete
- 7.4.2 Grading of aggregates
- 7.4.3 Concrete mixes
- 7.4.4 Water cement ratio
- 7.4.5 Factors affecting strength of concrete
- 7.4.6 Form work
- 7.4.7 Curing

7.5 Wood work

- 7.5.1 Frame and shutters of door and window
- 7.5.2 Timber construction of upper floors
- 7.5.3 Design and construction of stairs

7.6 Flooring and Finishing

- 7.6.1 Floor finishes: brick, concrete, flagstone
- 7.6.2 Plastering

8. Water Supply and Sanitation Engineering

8.1 General

- 8.1.1 Objectives of water supply system
- 8.1.2 Source of water and its selection: gravity and artisan springs, shallow and deep wells; infiltration galleries.

8.2 Gravity Water Supply System

- 8.2.1 Design period
- 8.2.2 Determination of daily water demand
- 8.2.3 Determination of storage tank capacity
- 8.2.4 Selection of pipe
- 8.2.5 Pipe line design and hydraulic grade line

8.3 Design of Sewer

- 8.3.1 Quantity of sanitary sewage
- 8.3.2 Maximum, Minimum and self cleaning velocity

8.4 Excreta Disposal and Unsewered Area

- 8.4.1 Pit latrine
- 8.4.2 Design of septic tank

9. Irrigation Engineering

9.1 General

- 9.1.1 Advantages and Disadvantages of irrigation

9.2 Water Requirement

- 9.2.1 Crop season and principal crops
- 9.2.2 Base period

9.3 Flow irrigation Canals

- 9.3.1 Canal losses and their minimization
- 9.3.2 Maximum and minimum velocities
- 9.3.3 Design of irrigation canal section based on manning's formula
- 9.3.4 Need and location of spillways
- 9.3.5 Head works for small canals

10. Highway Engineering

10.1 General

- 10.1.1 Introduction to transportation systems
- 10.1.2 Historic development of roads
- 10.1.3 Classification of road in Nepal
- 10.1.4 Basic requirements of road alignment

10.2 Geometric Design

- 10.2.1 Basic design control and criteria for design
- 10.2.2 Elements of cross section, typical cross-section for all roads in filling and cutting
- 10.2.3 Camber
- 10.2.4 Determination of radius of horizontal curves
- 10.2.5 Superlevation
- 10.2.6 Sight distances
- 10.2.7 Gradient
- 10.2.8 Use of Nepal Road Standard and subsequent revision in road design

10.3 Drainage System

- 10.3.1 Importance of drainage system and requirements of a good drainage system

10.4 Road Pavement

- 10.4.1 Pavement structure and its components: subgrade, sub-base, base and surface courses

10.5 Road Machineries

- 10.5.1 Earth moving and compacting machines

10.6 Road Construction Technology

- 10.7 Bridge
 - 10.7.1 T-beam bridge
 - 10.7.2 Timber bridges
- 10.8 Road Maintenance and Repair
 - 10.8.1 Type of maintenance Works
- 10.9 Tracks and Trails

11. Estimating and Costing

- 11.1 General
 - 11.1.1 Main items of work
 - 11.1.2 Units of measurement and payment of various items of work and material
 - 11.1.3 Standard estimate formats of government offices
- 11.2 Rate Analysis
 - 11.2.1 Basic general knowledge on the use of rate analysis norms prepared by Ministry of Works and Transport and the district rates prescribed by district development committee
- 11.3 Specifications
 - 11.3.1 Interpretation of specifications
- 11.4 Valuation
 - 11.4.1 Methods of valuation
 - 11.4.2 Basic general knowledge of standard formats used by commercial banks and NIDC for valuation

12. Construction Management

- 12.1 Organization
 - 12.1.1 Need for organization
 - 12.1.2 Responsibilities of a civil overseer
 - 12.1.3 Relation between Owner, Contractor and Engineer
- 12.2 Site Management
 - 12.2.1 Preparation of site plan
 - 12.2.2 Organizing labor
 - 12.2.3 Measures to improve labor efficiency
 - 12.2.4 Accident prevention
- 12.3 Contract Procedure
 - 12.3.1 Contracts
 - 12.3.2 Departmental works and day-work
 - 12.3.3 Types of contracts
 - 12.3.4 Tender and tender notice
 - 12.3.5 Earnest money and security deposit
 - 12.3.6 Preparation before inviting tender
 - 12.3.7 Agreement
 - 12.3.8 Conditions of contract
 - 12.3.9 Construction supervision
- 12.4 Accounts
 - 12.4.1 Administrative approval and technical sanction
 - 12.4.2 Familiarity with standard account keeping formats used in governmental organizations
 - 12.4.3 Muster roll
 - 12.4.4 Completion report

12.5 Planning and Control

- 12.5.1 Construction schedule
- 12.5.2 Equipment and materials schedule
- 12.5.3 Construction stages and operations
- 12.5.4 Bar chart

Airport Engineering

13.1 General

- 13.1.1 Introduction to Air Transport System
- 13.1.2 Historic development of Airports in Nepal
- 13.1.3 Classification of Airports
- 13.1.4 Airport terminologies

13.2 Design

- 13.2.1 Basic design control and criteria for design
- 13.2.2 General items contained in ANNEX 14 (ICAO Publication)
- 13.2.3 Planning of Airport and its elements
- 13.2.4 Terminal Building and Control Tower
- 13.2.5 Drainage System
- 13.2.6 Geometric design, pavement structure and its component
- 13.2.7 Basic knowledge of Heliport and Hangers

13.3 Airport Maintenance

- 13.3.1 Types of maintenance
- 13.3.2 Methods of maintenance
- 13.4.1 Province no.2 Province Civil Service Act, 2077
- 13.4.2 Province no . 2 Province Public Service Commission Act and rules.
- 13.4.3 Province no . 2 Engineering Related Act, Rules and Regulations.
- 13.4.4 Province no . 2 Engineering Related Status and Statistics.

खण्ड-२: कम्प्युटर सम्बन्धी प्रयोगात्मक परीक्षा -५० अङ्क

समय: ३० मिनेट

1. Computer fundamental
2. Operating System
3. Word processing
4. Electronic spreadsheet
5. Database management system
6. Presentation system
7. Internet Browsing & Website Management.