

राष्ट्रिय वाणिज्य बैंक लिमिटेड
तह ६, सहायक प्रबन्धक (इञ्जिनियर) (प्रशासन सेवा, इञ्जिनियरिङ्ग समूह)
खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

सेवा :- प्रशासन
तह :- ६

समुह :- इञ्जिनियरिङ्ग
पद :- सहायक प्रबन्धक (इञ्जिनियर)

उपसमूह :-
किसिम :- खुला

पाठ्यक्रम योजनालाई निम्नानुसार दुई चरणमा विभाजन गरिएको छ ।

प्रथम चरण :- लिखित परीक्षा

पूर्णाङ्क :- २००

द्वितीय चरण :- अन्तर्वार्ता

पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

१. प्रथम चरण : लिखित परीक्षा (Written Examination)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या x अङ्क	समय
प्रथम	Engineering and Construction	१००	४०	वस्तुगत	बहुवैकल्पिक प्रश्न (MCQ)	५० प्रश्न x १ अङ्क	४५ मिनेट
	Banking and Organizational Management			विषयगत	छोटो उत्तर	६ प्रश्न x ५ अङ्क	१ घण्टा ३० मिनेट
लामो उत्तर		२ प्रश्न x १० अङ्क					
द्वितीय	Engineering and Construction	१००	४०	विषयगत	छोटो उत्तर	४ प्रश्न x ५ अङ्क	३ घण्टा
					लामो उत्तर	८ प्रश्न x १० अङ्क	

२. द्वितीय चरण : अन्तर्वार्ता (Interview)

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	३०	मौखिक

दृष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- लिखित परीक्षामा सोधिने प्रश्नसंख्या र अंकभार यथासम्भव सम्बन्धित पत्र/विषयमा तोकिए अनुसार हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple choice) प्रश्नहरूको 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 ।
- वस्तुगत बहुवैकल्पिक हुने परीक्षामा परीक्षार्थीले उत्तर लेख्दा अंग्रेजी ठूलो अक्षर (Capital letter) A,B,C,D मा लेख्नुपर्नेछ । सानो अक्षर (Small letter) a,b,c,d लेखेको वा अन्य कुनै सङ्केत गरेको भए सबै उत्तरपुस्तिका रद्द हुनेछ ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नहरूको हकमा एउटा लामो प्रश्न वा एउटा प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
- विषयगत प्रश्न हुने पत्र/विषयका प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नको उत्तर सोही खण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जुन सुकै कुरा लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम, विनियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ
- पाठ्यक्रम स्वीकृत मिति : २०८२/०९/१७

प्रथम पत्र (Paper – I)

Banking and Organizational Management

Section – A (50 Marks)

1 Nepalese Banking and Other Related Institutions: History, Role and Contribution

- 1.1 The Central Bank
- 1.2 Commercial Banks
- 1.3 Other Banks and Financial Institutions
- 1.4 Non-Bank Financial Institutions
- 1.5 Investment and Merchant Banking
- 1.6 Mutual Funds

2 Banking Related Laws and Directives

- 2.1 Nepal Rastra Bank Act, 2058
- 2.2 Bank and Financial Institution Act, 2073
- 2.3 Payment and Settlement Act, 2075
- 2.4 Money Laundering Prevention Act, 2064
- 2.5 Banking Offence and Punishment Act, 2064
- 2.6 Foreign Exchange (Regulation) Act, 2019
- 2.7 Negotiable Instruments Act, 2034
- 2.8 Electronic Transaction Act, 2063
- 2.9 The Act on Recovery of Debts of Banks and Financial Institutions, 2058
- 2.10 Unified Directives and Circulars issued by Nepal Rastra Bank for Commercial Banks

3 Other Related Laws, Policies

- 3.1 Company Act, 2063
- 3.2 Income Tax Act, 2058
- 3.3 Labor Act, 2074
- 3.4 Public Procurement Act, 2063
- 3.5 Right to Information Act, 2064
- 3.6 Bonus Act, 2030
- 3.7 Cyber Resilience Guidelines, 2023 (Issued by Nepal Rastra Bank)
- 3.8 National Cyber Security Policy, 2023 (2080 BS)
- 3.9 राष्ट्रिय वाणिज्य बैंक, कर्मचारी सेवा विनियमावली, २०७०

4 Organizational Management and Control

- 4.1 Principles and Functions of Management
- 4.2 Human Resource Management
- 4.3 Risk Management
- 4.4 Stress Management, Conflict Management, Change
- 4.5 Total Quality Management (TQM)
- 4.6 Audit and Internal Control
- 4.7 Project Appraisal, Financial Statement Analysis and Break-even Analysis
- 4.8 Sources and Uses of Funds in Banking Industry
- 4.9 Principles and Utility of Budget

5 Organizational Behavior

- 5.1 Job Description, Analysis and Specialization
- 5.2 Motivation, Performance and Evaluation
- 5.3 Communication: Skill, Approach
- 5.4 Team Building
- 5.5 Customer Satisfaction and Service Delivery
- 5.6 Grievance Handling

6 Office Management

- 6.1 Record Keeping and Management: Filing, Indexing, Digitization
- 6.2 Office Layout and Logistic Management
- 6.3 Meeting Management
- 6.4 Urgency and Crisis Management
- 6.5 Customer Relationship Management

Section – B (50 × 1 = 50 Marks)

यस खण्डमा सोधिने बहुबैकल्पिक प्रश्नहरू (MCQ) द्वितीय पत्रको पाठ्यक्रमबाट सोधिनेछ ।

द्वितीय पत्र (Paper – II):
Engineering and Construction
Section – A (50 Marks)

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
- 1.2. Levelling
 - 1.2.1. Methods of Levelling
 - 1.2.2. Levelling Instruments
 - 1.2.3. Principle of Levelling
- 1.3. Plane Table Surveying
 - 1.3.1. Instruments and Accessories
 - 1.3.2. Methods of Plane Tabling
 - 1.3.3. Two-Point and Three-Point Problems
- 1.4. Theodolite and Traverse Surveying
 - 1.4.1. Basic Difference Between Various Theodolites
 - 1.4.2. Traverse and Its Significance
 - 1.4.3. Trigonometrical Levelling
 - 1.4.4. Checks in Closed Traverse
- 1.5. Contouring
 - 1.5.1. Features of Contour Lines
 - 1.5.2. Contour Locating Methods
 - 1.5.3. Plotting of Contour Lines
- 1.6. Total Stations
 - 1.6.1. Principle of Total Station
 - 1.6.2. Computation Process
- 1.7. Setting Out
 - 1.7.1. Small Buildings
 - 1.7.2. Simple Curves and Transition Curves

2. Construction Materials

- 2.1. Stone
 - 2.1.1. Characteristics
 - 2.1.2. Stone Formation and Availability in Nepal
 - 2.1.3. Stone as a Building Material (Laying Methods and Construction Suitability)
- 2.2. Cement
 - 2.2.1. Cement Types: Ingredients, Properties and Manufacturing Process
 - 2.2.2. Storage and Transport
 - 2.2.3. Cement Tests
 - 2.2.4. Admixtures: Types, Advantages and Disadvantages
- 2.3. Bricks
 - 2.3.1. Brick Types and Manufacturing Process
 - 2.3.2. Laying and Bonds
- 2.4. Sand: Properties and Uses
- 2.5. Aggregate: Types and Strength
- 2.6. Water Quality of Construction Purposes

- 2.7. Modern Construction Materials
 - 2.7.1. CSV Panel Board: Composition, Properties and Applications
 - 2.7.2. ASC Block: Characteristics, Benefits and Construction Methods
 - 2.7.3. Lightweight Panel Board: Types, Advantages and Uses in Construction
 - 2.7.4. CFRP, GFRP, AFRP, GFRC: Properties and Applications
3. **Structural Analysis**
 - 3.1. Loads and Supports
 - 3.2. Types of Internal Loads
 - 3.3. Working Stress and Ultimate Strength of Materials
 - 3.4. Relation Between the External Load, Shear Force and Bending Moment
 - 3.5. Thrust, Shear Force and Bending Moment (Statically Determinate Beams Under Point Load/UDL/UVL)
 - 3.6. Simple Strut Theory
4. **Structural Design**
 - 4.1. R.C. Section in Bending
 - 4.1.1. Under Reinforced, Over Reinforced and Balanced Sections
 - 4.1.2. Analysis of Single and Double Reinforced Rectangular Section
 - 4.1.3. Critical Section, Development Length, End Anchorage and Rebar Splicing
 - 4.2. Shear and Bond for R.C. Sections
 - 4.2.1. Shear Resistance of R.C. Section
 - 4.2.2. Types of Shear Reinforcement and Their Design
 - 4.2.3. Anchorage for Shear Reinforcement
 - 4.3. Axially Loaded R.C. Columns
 - 4.3.1. Pedestal, Short and Long Columns
 - 4.3.2. Design of R.C. Column Sections: Rectangular
 - 4.4. RC Foundation
 - 4.4.1. Types and Their Suitability
 - 4.4.2. Design Principles of Strip, Isolated, Strap, Combined and Mat Foundation
 - 4.5. Design and Drafting of R.C. Structures
 - 4.5.1. Singly and Doubly R.C. Rectangular Beams
 - 4.5.2. One-Way and Two-Way Slabs
 - 4.5.3. Axially Loaded Short Columns
 - 4.5.4. Foundations: Isolated, Strap, Combined and Mat Foundation

Section – B (50 Marks)

5. **Soil Mechanics**
 - 5.1. General
 - 5.1.1. Soil Types and Classification
 - 5.1.2. Three Phase System of Soil
 - 5.1.3. Interrelationship Between Specific Gravity, Void Ratio, Porosity, Degree of Saturation, Percentage of Air Voids, Air Content and Density Index
 - 5.2. Soil Compaction
 - 5.2.1. Factors Affecting Soil Compaction
 - 5.2.2. Optimum Moisture Content
 - 5.2.3. Relation Between Dry Density and Moisture Content
 - 5.3. Shear Strength of Soils
 - 5.4. Earth Pressures
 - 5.4.1. Active and Passive Earth Pressure
 - 5.4.2. Lateral Earth Pressure Theory
 - 5.4.3. Rankine's Earth Pressure Theory

6. Building Construction Technology

6.1. Walls

- 6.1.1. Types of Wall and Their Functions
- 6.1.2. Choosing Wall Thickness, Height To Length Relation
- 6.1.3. Use of Scaffolding
- 6.1.4. Safety Measures

6.2. Concrete Technology

- 6.2.1. Constituents of Cement Concrete
- 6.2.2. Grading of Aggregates
- 6.2.3. Concrete Mixes and Water Cement Ratio
- 6.2.4. Factor Affecting Concrete Strength
- 6.2.5. Form Work
- 6.2.6. Curing

6.3. Wood Work

- 6.3.1. Frame and Shutters of Door and Window
- 6.3.2. Timber Construction of Upper Floors
- 6.3.3. Design and Construction of Stairs

6.4. Flooring and Finishing

- 6.4.1. Floor Finishes: Brick, Concrete, Flagstone
- 6.4.2. Plastering and Punning

6.5. Construction and Expansion Joints: Types and Characteristics

6.6. Foundation

- 6.6.1. Subsoil Exploration
- 6.6.2. Types and Suitability of Different Foundation: Shallow, Deep
- 6.6.3. Shoring and Dewatering

6.7. Damp Proofing

- 6.7.1. Source of Dampness
- 6.7.2. Remedial Measures To Pre-Wet Dampness

7. Estimating and Costing, Valuation and Specifications

7.1. Methods of Calculation Quantities

7.2. Key Components of Estimating Norms and Rate Analysis

7.3. Preparation Or Bill of Quantities

7.4. Purpose, Types and Importance of Specification

7.5. Purpose, Principles and Methods of Valuation

8. Construction Management and Professional Practices

8.1. Construction Scheduling and Planning

8.1.1. CPM and PERT

8.1.2. Bar Chart and Gantt Chart

8.2. Contractual Procedure and Management

8.2.1. Types of Contracts

8.2.2. Tender and Tendering Process

8.2.3. Bid Security, Preparation of Bidding Document and Agreement

8.2.4. Pre and Post Qualification of Contract

8.2.5. Conditions of Contract

8.2.6. Tender Evaluation and Contractor Selection

8.2.7. Construction Supervision

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8.3. Ethics and Professionalism:

8.3.1. Code of Conduct and Guidelines of Professional Engineering Practices

8.3.2. Relation With Clients, Contractor and Fellow Professionals

8.4. Norms and Code of Conduct of Local Approving Authorities

Syllabus Division

Paper	Subject	Section	Marks	Unit	Question Model
I	Banking and Organizational Management	A	50	1 to 6	6 Questions x 5 Marks 2 Questions x 10 Marks
	Engineering and Construction	B	50	द्वितीय पत्रको Section A बाट	25 Questions x 1 Marks
				द्वितीय पत्रको Section B बाट	25 Questions x 1 Marks
II	Engineering and Construction	A	50	1 to 4	2 Questions x 5 Marks 4 Questions x 10 Marks
		B	50	5 to 8	2 Questions x 5 Marks 4 Questions x 10 Marks