

राष्ट्रिय वाणिज्य बैंक लिमिटेड
तह ९, वरिष्ठ प्रबन्धक (इञ्जिनियर) (प्रशासन सेवा, इञ्जिनियरिङ्ग समूह)
खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

सेवा :- प्रशासन

समुह :- इञ्जिनियरिङ्ग

उपसमुह :-

तह :- ९

पद :- वरिष्ठ प्रबन्धक (इञ्जिनियर)

किसिम :- खुला

पाठ्यक्रम योजनालाई निम्नानुसारका तीन चरणमा विभाजन गरिएको छ ।

प्रथम चरण :- लिखित परीक्षा

पूर्णाङ्क :- २००

द्वितीय चरण :- प्रस्तुतीकरण

पूर्णाङ्क :- १०

तृतीय चरण :- अन्तर्वार्ता

पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

१. प्रथम चरण : लिखित परीक्षा (Written Examination)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या × अङ्क	समय
प्रथम	Banking and Organizational Management	१००	४०	विषयगत	लामो उत्तर आउने प्रश्न	१० प्रश्न × १० अङ्क	३ घण्टा
द्वितीय	Engineering, Construction and Technology	१००	४०	विषयगत	विश्लेषणात्मक प्रश्न	६ प्रश्न × १० अङ्क	३ घण्टा
					समस्या समाधानमुलक प्रश्न	२ प्रश्न × २० अङ्क	

२. द्वितीय चरण : प्रस्तुतीकरण (Presentation)

विषय	पूर्णाङ्क	परीक्षा प्रणाली	समय
प्रस्तुतीकरण	१०	व्यक्तिगत प्रस्तुतीकरण	१५ मिनेट

३. तृतीय चरण : अन्तर्वार्ता (Interview)

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तर्वार्ता	३०	मौखिक

द्रष्टव्य :

- 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 प्रश्न संख्या र अंकभार यथासम्भव सम्बन्धित पत्र/विषयमा तोकिए अनुसार हुनेछ ।
- विषयगत प्रश्नहरूको हकमा एउटा लामो प्रश्न वा एउटै 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 हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्भन्नु पर्दछ ।
- प्रथम चरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको परीक्षामा सम्मिलित गराइनेछ । साथै द्वितीय चरणको परीक्षामा सहभागी भएका उम्मेदवारलाई मात्र तृतीय चरणको परीक्षामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम स्वीकृत मिति: २०८२/०९/१७

प्रथम पत्र (Paper – I)

Banking and Organizational Management

Section – A (50 Marks)

1 Banking and Related Institutions

- 1.1 International Financial Institutions: World Bank Group, International Monetary Fund, Asian Development Bank, Asian Infrastructure Investment Bank (AIIB) and their role in Nepal's Economic Development.
- 1.2 Nepal Rastra Bank: Regulatory and Supervisory Dimensions
- 1.3 Rastriya Banijya Bank: Role, Contribution, Challenges and Prospects
- 1.4 Banks and Financial Institutions in Nepal: Evolution, Status, Challenges
- 1.5 Other Related Institutions:
 - 1.5.1 Credit Information Center Ltd (CICL)
 - 1.5.2 Nepal Clearing House Limited (NCHL)
 - 1.5.3 Credit Rating Agencies
 - 1.5.4 Employee Provident Fund (EPF)
 - 1.5.5 Citizen Investment Trust
 - 1.5.6 Social Security Fund (SSF)
 - 1.5.7 Nepal Insurance Authority
 - 1.5.8 Securities Board of Nepal (SEBON), Nepal Stock Exchange Ltd.
 - 1.5.9 The Institute of Chartered Accountants of Nepal (ICAN)

2 Banking Related Laws, Bylaws, Rules and Regulations

- 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 The Act on Recovery of Debts of Banks and Financial Institutions, 2058

3 Other Related Laws, Policies

- 3.1 Public Procurement Act, 2063
- 3.2 Negotiable Instrument Act, 2034
- 3.3 National Cyber Security Policy, 2023 (2080 BS)
- 3.4 Monetary Policy and Fiscal Policy
- 3.5 Unified Directives and Circulars issued by Nepal Rastra Bank for Banks and Financial Institutions in Nepal

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Section – B (50 Marks)

- 4 Rastrya Banijya Bank Related Bylaws, Rules and Manuals:**
- 4.1 Rastrya Banijya Bank Ltd., Credit Manual, 2077
 - 4.2 राष्ट्रिय वाणिज्य बैंक लि., कर्जा असुली कार्यविधि, २०७७
 - 4.3 राष्ट्रिय वाणिज्य बैंक लि., आर्थिक प्रशासन तथा खरिद विनियमावली, २०६८
 - 4.4 राष्ट्रिय वाणिज्य बैंक लि., कर्मचारी सेवा विनियमावली, २०७०
 - 4.5 Rastrya Banijya Bank Ltd., Branch Operation Manual, 2077
 - 4.6 Rastrya Banijya Bank Ltd., Notes to Accounts and Account Policies
 - 4.7 Rastrya Banijya Bank Ltd., Trade Finance Manual, 2023
 - 4.8 Rastrya Banijya Bank Ltd., Asset Liability Management, Treasury Operation Manual, 2023
 - 4.9 Rastrya Banijya Bank Ltd., ICT (Information and Communications Technology) Policy and Guidelines 2021
 - 4.10 Rastrya Banijya Bank Ltd., Risk Management Policy 2025
 - 4.11 Rastrya Banijya Bank Ltd., ICAAP (Internal Capital Adequacy Assessment Process) Policy 2015
- 5 Organizational Management and Planning**
- 5.1 Human Resource Management, Succession Planning, Employee Empowerment and Capacity Building
 - 5.2 Knowledge Management, Talent management, Stress Management, Conflict Management, Total Quality Management, Change Management
 - 5.3 Risk Management
 - 5.4 Business Intelligence, Competitive Intelligence
 - 5.5 Business Continuity Plan (BCP), Disaster Recovery Planning (DRP)
 - 5.6 Business Process Reengineering (BPR)
 - 5.7 Enterprise Resource Planning (ERP)
 - 5.8 Project Appraisal, Financial Statement Analysis and Break-even Analysis
 - 5.9 Sources and Uses of Funds
 - 5.10 Management Information System
- 6 Organizational Behavior and Development**
- 6.1 Employee Motivation: Techniques, Principles and Practices
 - 6.2 Performance Monitoring and Evaluation
 - 6.3 Communication: Skill, Approach, Issues and Challenges
 - 6.4 Decision Making: Process, Effectiveness and Efficiency
 - 6.5 Managing Organizational Change and Innovations
 - 6.6 Leadership Development
 - 6.7 Emotional Intelligence and Empathy
 - 6.8 Grievance Handling

Subject	Section	Marks	Unit	Question Model
Banking and Organizational Management	A	50	1	5 Questions × 10 Marks
			2	
			3	
	B	50	4	5 Questions × 10 Marks
			5	
			6	

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

1. Construction Materials

- 1.1 Stone
 - 1.1.1 Characteristics
 - 1.1.2 Stone formation and availability in Nepal
 - 1.1.3 Stone as a building material (laying methods and construction suitability)
- 1.2 Cement
 - 1.2.1 Cement types: ingredients, properties and manufacturing process
 - 1.2.2 Storage and transport
 - 1.2.3 Cement tests
 - 1.2.4 Admixtures: types, advantages and disadvantages
- 1.3 Bricks
 - 1.3.1 Brick types
 - 1.3.2 Manufacturing process
 - 1.3.3 Laying and bonds
- 1.4 Paints and Varnishes
 - 1.4.1 Type and selection
 - 1.4.2 Preparation techniques and uses
- 1.5 Aggregate: types and strength
- 1.6 Water quality of construction purposes
- 1.7 Advanced and modern construction materials
 - 1.7.1 Fibre reinforced polymer: properties, types, advantages, and applications
 - 1.7.2 High performance concrete: properties and applications
 - 1.7.3 Geopolymer concrete: composition and eco-friendly benefits
 - 1.7.4 Nanotechnology in construction materials: role, advantages, and future applications
 - 1.7.5 3-D printed construction materials: emerging technologies and applications
 - 1.7.6 Sustainable and eco-friendly materials: green building technologies

2. Structural Analysis

- 2.1 Internal stresses, working stress and ultimate strength of materials
- 2.2 Relation between the external load, shear force and bending moment
- 2.3 Internal force diagram: thrust, shear force and bending moment (statically determinate beams under point load/UDL/UVL)
- 2.4 Analysis of determinate and simple indeterminate structures

3. Soil Mechanics

- 3.1 Field identification and classification of soils
- 3.2 Permeability of soils: influencing factors, determination of permeability coefficient (laboratory and field methods)
- 3.3 Effective stress: influencing factors; capillary rise; quick sand condition
- 3.4 Seepage analysis: flow net and its application
- 3.5 Shear strength of soils: concept of shear strength, principal planes and principal stresses, Mohr-Coulomb failure theory, normal stress and shear stress at different plane, types of shear tests (direct shear test, unconfined compression test, triaxial test, vane shear test)
- 3.6 Consolidation and settlements: concept of consolidation, consolidation types, pre-consolidation pressure, settlement of structures resting on soil (nature, causes and remedial measures)
- 3.7 Slope stability: causes of slope failures, types of slope and slope failures, critical surfaces and factor of safety, method of stability analysis

4. Structural Design

- 4.1 Reinforced Concrete Structures
 - 4.1.1 Working stress and limit state philosophy and their differences
 - 4.1.2 RC sections: under-reinforced, over-reinforced, and balanced section
 - 4.1.3 RC beam sections: single and double reinforced rectangular section
 - 4.1.4 Analysis and design of rc beams and slabs: bending, shear, deflection, bond and end anchorage
 - 4.1.5 Design of axially loaded columns
 - 4.1.6 Design of isolated and combined footings
 - 4.1.7 Introduction to pre-stressed concrete
- 4.2 Design and construction requirements of earthquake resistant structures
- 4.3 Code permission for seismic resistant design

5. Foundation Engineering

- 5.1 General: types and selection of foundation, requirements of ideal foundation, types of design loads
- 5.2 Bearing capacity and settlements: types and influencing factors of bearing capacity, foundation failure modes, Terzaghi's theory for bearing capacity, ultimate bearing capacity (cohesionless and cohesive soils), settlement (types, nature and effects)
- 5.3 Types and suitability of foundation in context of nepal
- 5.4 Design of foundation: spread foundation, combined footing, strap footing, mat foundation, pile foundation, well foundation
- 5.5 Foundation stabilization and underpinning: soil stabilization, dynamic deep compaction, grouting and its methods, underpinning methods, dewatering methods

Section – B (50 Marks)

6. Building Construction Technology

- 6.1 Concrete Technology
 - 6.1.1 Constituents and properties of concrete
 - 6.1.2 Water cement ratio
 - 6.1.3 Grade and strength of concrete, concrete mix design, testing of concrete
 - 6.1.4 Mixing, transportation, pouring and curing of concrete
 - 6.1.5 Concrete admixtures
 - 6.1.6 Curing
- 6.2 Flooring and Finishing
 - 6.2.1 Floor finishes: brick, concrete, flagstone
 - 6.2.2 Plastering and punning
- 6.3 Construction and Expansion Joints: Types and Characteristics
- 6.4 Damp Proofing
 - 6.4.1 Source of dampness
 - 6.4.2 Remedial measures to pre-wet dampness

7. Hydropower

- 7.1 Hydropower in Nepal: development, policy, acts and regulations
- 7.2 Types of hydropower projects (Peaking Run-Off the River-Storage and Pump Storage)
- 7.3 Major components of hydropower project
- 7.4 Flow duration curve, reservoir capacity, reservoir sedimentation, useful life of reservoir
- 7.5 Power demand analysis and forecast
- 7.6 Potential and firm power, maximum power output, firm energy, surplus energy, seasonal energy, and average annual energy
- 7.7 Concept of load, load curve, capacity factor, load factor, and utilization factor
- 7.8 Power demand variation (daily, weekly, monthly, seasonal, and annual)

8. Estimating and Costing, Valuation and Specifications

- 8.1 General
 - 8.1.1 Main items of work
 - 8.1.2 Units of measurement and payment of various items of work and material
 - 8.1.3 Standard estimate formats of government offices
- 8.2 Rate analysis: basic knowledge on the use of rate analysis norms approved by governments
- 8.3 Specifications: purpose, types and importance of specification
- 8.4 Valuation
 - 8.4.1 Purpose, principles and methods of valuation
 - 8.4.2 Expert knowledge about standard formats used by commercial banks for valuation

9. Construction Management and Professional Practices

- 9.1 Construction scheduling and planning
 - 9.1.1 Bar chart and Gantt chart
 - 9.1.2 Critical path method, program evaluation review technique
- 9.2 Contractual procedure and management
 - 9.2.1 Types of contracts, tender and tendering process, and bid security
 - 9.2.2 Contract process: prequalification and post qualification
 - 9.2.3 Conditions of contract
 - 9.2.4 Preparation of bidding document and agreement
 - 9.2.5 Tender evaluation and contractor selection
 - 9.2.6 Construction supervision
- 9.3 Ethics and professionalism
 - 9.3.1 Code of conduct and guidelines of professional engineering practices
 - 9.3.2 Relation with clients, contractor and fellow professionals
- 9.4 Public procurement practices of works, goods and services and its importance
- 9.5 Norms and code of conduct of metropolitan office
- 9.6 Conflict resolution and its importance in construction projects

10. Technology and Environment

- 10.1 Technological development in nepal
- 10.2 Promotion of local technology and its adaptation
- 10.3 Environmental impact assessment, initial environment examination,
- 10.4 Government rules and regulations and procedures for IEE/EIA
- 10.5 Global warming phenomena
- 10.6 Sources of pollution: point/non-point (for air and water)
- 10.7 Social mobilization in local infrastructure development and utilization in nepal
- 10.8 Participatory approach in planning, implementation, maintenance and operation of local infrastructure

Subject	Section	Marks	Unit	Question Model
Engineering, Construction and Technology	A	50	1	3 Questions × 10 Marks 1 Question × 20 Marks
			2	
			3	
			4	
			5	
	B	50	6	3 Questions × 10 Marks 1 Question × 20 Marks
			7	
			8	
			9	
			10	