Selection Process of Non-Teaching Posts

General Instruction

The Selection process will be consisting of (i) Stage I: Written test and (ii) Stage II: Skill test/Interview.

Stage I: Written Test

The Stage I written test spanning over 3 hours duration in English language shall comprise of single compulsory paper consisting of objective type questions for 200 marks with following weightage:

Junior Secretariat Assistant

Component	Weightage
Mathematical Abilities and Reasoning & General Intelligence	40%
General Awareness and Computer Proficiency	20%
English Language and Comprehension	40%

All posts except Junior Secretariat Assistant

Component	Weightage
Post specific	50%
Mathematical Abilities and Reasoning & General Intelligence	15%
General Awareness and Computer Proficiency	15%
English Language and Comprehension	20%

Based on the written test, candidates will be shortlisted for the **Skill Test/Interview**. The shortlisting criteria are given below.

(a) The candidates applied for the posts and whose application in hard copy have been received on or before the closing date as per requirement of the advertisement will be called to appear in the written test (Stage I).
(b) The candidates will be shortlisted based on their total scores obtained in all sections of the written test, and also duly fulfilling essential qualification, experiences, age & other criteria as per the advertisement given against each post.

Stage II: Interview (Librarian Post only)

The merit list shall be prepared based on the marks obtained both in Stage I (Written test) and Stage II (Interview). The weightage for the Stage I (Written test) is 70% and Stage II (Interview) is 30%.

Stage II: Skill Test (Other posts except Librarian)

The Stage II Skill test shall be conducted only for the shortlisted candidates of Stage I. The Stage II Skill test shall be of 100 marks spanning over 2 hours and the qualifying marks for Stage II is 60 %. The merit list shall be prepared based on the marks obtained in Stage I (Written test) among the qualified candidates of Stage II (Skill test).

Stage I: Indicative Syllabus for Written Test

For Librarian Post

Library Organisation and Management:
Library – Definition, Scope and Functions, History and Development of Libraries, Laws of Library Science; Types of Libraries – Public, Academic and Special; Library Movement in India, Library Legislation in India; Organisations and institutions - UNESCO, IFLA, FID, INIS, NISSAT, etc. involved in the growth of library and information services; Library Cooperation and Extension Services; Components of Library – Acquisition, Technical, Circulation Sections; Preservation and Maintenance and Stock Verification of Books; Book Selection – Principles and Tools; Library Building and Furniture, Library Rules, Library Committee, Annual Report.

Information Sources and Services:
Information: Scope, Purpose and Characteristics; Information Sources and their Types: Primary Sources, Secondary Sources, Tertiary Sources; Information Services: Need, Purpose and Types, Reference Service, Document Delivery Service (DDS); Users: Their Information Needs, Awareness Service, User Orientation.

Library Classification:
Basics of Classification, Library Classification – Need and Purpose, Notation – Need and Types, Fundamental Categories, Common Isolates, Call number, Dewey Decimal Classification, Colon Classification.

Library Cataloguing Theory and Practice:
Basics of Cataloguing, Library Catalogue – Need, Purpose and Functions, Physical Forms of Catalogue, Inner Forms of Catalogue, Cooperative Cataloguing, Centralized Cataloguing and Union Catalogue; Canons and Principles; Library Cataloguing Codes – CCC and AACR; Reference and Information Sources: Bibliography and Reference Sources – Types of Bibliography; Reference Sources – Dictionaries, Encyclopedias, Ready Reference Sources, etc.; Sources of Information – Primary, Secondary, Tertiary, Documentary, Non-Documentary; E-Documents, E-Books, E-Journals, etc., Intellectual Property Rights (IPR), Copyright Act, Open Educational Resources.

Information Services:
Concept and need for Information; Types of Documents; Nature and organization of Information Services, Abstracting and Indexing Services; Computer based Information Services – CAS, SDI; Information Technology: Basics Introduction to computers; Use of computers in Library housekeeping, Library Automation; Software and software packages; Networks – Consortium – INFLIBNE,T DELNET, NICNET, etc.; National and International Information Systems – NISSAT, NASSDOC, INSDOC, DESIDOC, etc.

Library Automation:
Areas, Planning, Selection of Hardware and Software, Implementation and Evaluation; Basics of Library Automation Packages; Standards for Library Automation; Barcode, RFID, QR Code, Biometric; Smartcard: Features and Applications; Digitization – Planning, Selection of Materials, Hardware, Software, Process, Issues; Digital Library: Overview,

Genesis, Characteristics, Types, Architecture, Standards, Formats and Protocols, DOI, Components of Digital Library, Digitization, Open Access and Digital Rights/Access Management, Services, Preservation, Standards; Digital Library Practice- Basics of Open Source Digital Library Software; Digital Preservation - Need, Purpose, Standards, Methods, Techniques, Projects (National and International); Digital Library Initiatives – National and International; Institutional Repositories - Need, Purpose, Types and Tools; Institutional Repositories in India; ROAR, DOAR, SHARPA-ROMIO; Content Management Systems – Architecture, Data Integration, CMS Software – Selection, Implementation and Evaluation; Application of Artificial Intelligence, Expert Systems and Robotics in Libraries; Social Mobile Analytics Cloud (SMAC); Cloud Computing; Ontology – Tools (RDF, RDFS, Potege); Semantic Web, Linked Data, Big Data, Data Mining, Data Harvesting; Automated House-Keeping Operations.

Computer Technology for Library:
Character Representation (ASCII, ISCII, Unicode); Computer Hardware, Software; Storage Devices; Input and Output Devices; Types of Software - System Software, Application Software; Office Tools; Programming Languages – Object Oriented, Procedural, High Level, Scripting; Web Languages; Telecommunication - Transmission Channels, Mode, and Media, ISDN, PSDN, Multiplexing, Modulation, Standards and Protocols; Wireless Communication – Media, Wi-fi, Li-fi, Satellite Communication, Mobile Communication; Computer Networks - Topologies, Types of Networks – LAN, MAN, WAN; Internet - Web browsers, WWW, E-mail; Search Engines, Meta and Entity Search engines; Internet Protocols and Standards – HTTP, SHTTP, FTP, SMTP, TCP/IP, URI, URL; Hypertext, Hypermedia, Multimedia, Video conferencing, Virtual Reality, Augmented Technologies; Data Security, Network Security, Firewalls, Cryptographic Techniques, Anti-virus, software, Anti-spyware, Intrusion Detection System.

Mathematical Abilities:
Number Systems: Computation of Whole Number, Decimal and Fractions, Relationship between numbers.
Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and Compound), Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time and work.
Algebra: Basic algebraic identities of School Algebra and Elementary surds and Graphs of Linear Equations.
Geometry: Familiarity with elementary geometric figures and facts: Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles.
Mensuration: Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square Base.
Trigonometry: Trigonometry, Trigonometric ratios, Complementary angles, Height and distances. Standard Identities.
Statistics and probability: Use of Tables and Graphs: Histogram, Frequency polygon, Bar-diagram, Pie-chart; Measures of central tendency: mean, median, mode, standard deviation; calculation of simple probabilities.

Reasoning & General Intelligence:
Questions of both verbal and non-verbal type. These will include questions on Semantic Analogy, Symbolic operations, Symbolic/ Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/ Number Classification, Drawing inferences, Figural Classification, Punched hole/ pattern-folding & unfolding, Semantic Series, Figural Pattern-folding and completion, Number Series, Embedded figures, Figural Series, Critical Thinking, Problem Solving, Emotional Intelligence, Word Building, Social Intelligence, Coding and de-coding, Numerical operations, Other subtopics, if any.

General Awareness:
Questions are designed to test the candidates' general awareness of the environment around them and its application to society. Questions are also designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General policy and scientific research.

Computer Proficiency:
Computer Basics: Organization of a computer, Central Processing Unit (CPU), input/ output devices, computer memory, memory organization, back- up devices, PORTs, Windows Explorer, Keyboard shortcuts.
Software: Windows Operating system including basics of Microsoft Office like MS word, MS Excel and Power Point etc.
Working with Internet and e-mails: Web Browsing & Searching, Downloading & Uploading, Managing an E-mail Account, e-Banking.
Basics of networking and cyber security: Networking devices and protocols, Network and information security threats and preventive measures.

English Language and Comprehension:
Vocabulary, grammar, sentence structure, synonyms, antonyms and their correct usage; Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting mis-spelt words, Idioms & Phrases, One word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion into Direct/ Indirect narration, Shuffling of Sentence parts, Shuffling of Sentences in a passage, Cloze Passage, Comprehension Passage. To test comprehension, two or more paragraphs will be given and questions based on those will be asked. At least one paragraph should be a simple one based on a book or a story and the other paragraph should be based on current affairs editorial or a report.

For Technician (Civil Engg.) Post

Building Materials :- Physical and Chemical properties, classification, standard tests, uses and manufacture/quarrying of materials e.g. building stones, silicate based materials, cement (Portland based), asbestos products, timber and wood based products, laminates, bituminous materials, paints, varnishes.

Theory of structures: Elasticity constants, types of beams – determinate and indeterminate, bending moment and shear force diagrams of simply supported, cantilever and over hanging beams. Moment of area and moment of inertia for rectangular & circular sections, bending moment and shear stress for tee, channel and compound sections, Torsion of circular section.

Concrete Technology :- Properties, Advantages and uses of concrete, cement, aggregates, importance of water quality, water cement ratio, workability, mix design, storage, batching, mixing, placement, compaction, finishing and curing of concrete, quality control of concrete, hot weather and cold weather concreting, repair and maintenance of concrete structures.

RCC Design: RCC beams-flexural strength, shear strength, bond strength, design of singly reinforced and double reinforced beams, cantilever beams. T-beams, lintels. One way and two way slabs, isolated footings. Reinforced columns, staircases, IS provisions.
Steel Design: Steel design and construction of steel columns, beams, roof trusses, plate girders, IS provisions.

Estimating, Costing and Valuation:- estimate, glossary of technical terms, analysis of rates, methods and unit of measurement.

Surveying:- Principles of surveying, measurement of distance, measurements of angles, conventional methods of survey, application of EDM and total station in land surveying.

Soil Mechanics:- Origin of soil, phase diagram, Definitions-void ratio, porosity, degree of saturation, water content, specific gravity of soil grains, unit weights, Grain size distribution curves and their uses. Index properties of soils, Atterberg's limits, ISI soil classification and plasticity chart. Permeability of soil, effective stress, quick-sand, consolidation of soils, e-log p curve, computation of ultimate settlement. Shear strength of soils, direct shear test, Vane shear test, Triaxial test. Soil compaction, Laboratory compaction test, Maximum dry density and optimum moisture content, earth pressure theories, active and passive earth pressures, Bearing capacity of soils, plate load test, standard penetration test.

Highway & Transportation Engineering:- Highway Engineering – cross sectional elements, geometric design, types of pavements, pavement materials – aggregates and bitumen, different tests, Design of flexible and rigid pavements –Bituminous construction, Rigid pavement joint, pavement maintenance, Highway drainage.

Environmental Engineering:- Quality of water, source of water supply, purification of water, need of sanitation, sewerage systems, circular sewer, oval sewer, sewer appurtenances, sewage treatments. Surface water drainage. Solid waste management. Air pollution – pollutants, causes, effects, control.

Mathematical Abilities:
Number Systems: Computation of Whole Number, Decimal and Fractions, Relationship between numbers.
Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and Compound), Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time and work.
Algebra: Basic algebraic identities of School Algebra and Elementary surds and Graphs of Linear Equations.
Geometry: Familiarity with elementary geometric figures and facts: Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles.
Mensuration: Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square Base.
Trigonometry: Trigonometry, Trigonometric ratios, Complementary angles, Height and distances. Standard Identities.
Statistics and probability: Use of Tables and Graphs: Histogram, Frequency polygon, Bar-diagram, Pie-chart; Measures of central tendency: mean, median, mode, standard deviation; calculation of simple probabilities.

Reasoning & General Intelligence:
Questions of both verbal and non-verbal type. These will include questions on Semantic Analogy, Symbolic operations, Symbolic/ Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/ Number Classification, Drawing inferences, Figural Classification, Punched hole/ pattern-folding & unfolding, Semantic Series, Figural Pattern-folding and completion, Number Series, Embedded figures, Figural Series, Critical Thinking, Problem Solving, Emotional Intelligence, Word Building, Social Intelligence, Coding and de-coding, Numerical operations, Other subtopics, if any.

General Awareness:
Questions are designed to test the candidates' general awareness of the environment around them and its application to society. Questions are also designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General policy and scientific research.

Computer Proficiency:
Computer Basics: Organization of a computer, Central Processing Unit (CPU), input/ output devices, computer memory, memory organization, back- up devices, PORTs, Windows Explorer, Keyboard shortcuts.
Software: Windows Operating system including basics of Microsoft Office like MS word, MS Excel and Power Point etc.
Working with Internet and e-mails: Web Browsing & Searching, Downloading & Uploading, Managing an E-mail Account, e-Banking.
Basics of networking and cyber security: Networking devices and protocols, Network and information security threats and preventive measures.

English Language and Comprehension:

Vocabulary, grammar, sentence structure, synonyms, antonyms and their correct usage; Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting mis-spelt words, Idioms & Phrases, One word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion into Direct/ Indirect narration, Shuffling of Sentence parts, Shuffling of Sentences in a passage, Cloze Passage, Comprehension Passage. To test comprehension, two or more paragraphs will be given and questions based on those will be asked. At least one paragraph should be a simple one based on a book or a story and the other paragraph should be based on current affairs editorial or a report.

For Section Officer Grade I and Grade II (Accounts) Posts

Financial Accounting: Nature and scope. Limitations of financial accounting. Basic concepts and conventions generally accepted accounting principles.
Basic concepts of accounting: Single and double entry, Books of original entry. Bank Reconciliation, Journal, ledgers, Trial balance, Rectification of Errors, Manufacturing, Trading, Profit & loss approximation.
Accounts, Balance sheet, Distinction between Capital and Revenue Expenditure, Depreciation Accounting.
Valuation of Inventories. Non-profit organizations accounts, Receipts and payments and Income & Expenditure accounts. Bills of exchange. Self-balancing ledgers

Comptroller & Auditor General of India - Constitutional provisions, Role and responsibility

Finance Commission - Role and functions

Basic Concept of Economics and introduction to Microeconomics – Definition, scope and nature of Economics. Methods of Economic study and Central problems of an Economy and Production possibilities curve

Theory of Demand supply: Meaning and determinants of demand, Law of demand and elasticity of demand, Price, income and cross elasticity; Theory of Consumer's behavior Marshallian approach and Indifference curve approach, Meaning and determinants of Supply, Law of Supply and Elasticity of Supply.

Theory of Production and Cost - Meaning and Factors of production; Laws of production- Law of variable proportions and Laws of returns to scale.

Forms of Market and price determination in different markets - Various forms of Markets - Perfect Competition, Monopoly, Monopolistic, Competition, Oligopoly and Price determination in these markets.

Money and Banking:
Monetary/Fiscal policy- Role and fractions of Reserve Bank of India; functions of Commercial Banks/ RBI/Payment Banks.
Budget and Fiscal Deficits and Balance of payments.
Fiscal Responsibility and Budget Management Act, 2003

Government Rules and Regulations:
Inventory management, Role of DDO, Income tax acts and rules, GST, professional tax and other tax rules, Procurement of goods and services, GeM and others, contract management, audit of autonomous bodies, C&AG etc, balance sheet, trial balance, ledgers and posting, bank reconciliation statement, receipt & Payments, preparation of budget and its allocation, GPF rules, Pension rules, GFR-2017, New Pension Scheme, etc. Provident Fund, PFMS.

Basics of FR & SR and constitutional provisions relating to service matters, Children Education Allowance, Compensatory Allowance, CCS (Conduct) Rules, Departmental Promotion Committee, MACP, Deputation and foreign Service, CCS (CCA) Rules, Leave

Travel Concession, CGHS, Mechanical Attendance Rules, Pay & Allowances, Pay Fixation, Reservations and Concession in appointments, Resignation, Removal and Dismissal, Retirement on Superannuation, Seniority and Promotions, Travelling matters

Mathematical Abilities:
Number Systems: Computation of Whole Number, Decimal and Fractions, Relationship between numbers.
Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and Compound), Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time and work.
Algebra: Basic algebraic identities of School Algebra and Elementary surds and Graphs of Linear Equations.
Geometry: Familiarity with elementary geometric figures and facts: Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles.
Mensuration: Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square Base.
Trigonometry: Trigonometry, Trigonometric ratios, Complementary angles, Height and distances. Standard Identities.
Statistics and probability: Use of Tables and Graphs: Histogram, Frequency polygon, Bar-diagram, Pie-chart; Measures of central tendency: mean, median, mode, standard deviation; calculation of simple probabilities.

Reasoning & General Intelligence:
Questions of both verbal and non-verbal type. These will include questions on Semantic Analogy, Symbolic operations, Symbolic/ Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/ Number Classification, Drawing inferences, Figural Classification, Punched hole/ pattern-folding & unfolding, Semantic Series, Figural Pattern-folding and completion, Number Series, Embedded figures, Figural Series, Critical Thinking, Problem Solving, Emotional Intelligence, Word Building, Social Intelligence, Coding and de-coding, Numerical operations, Other subtopics, if any.

General Awareness:
Questions are designed to test the candidates' general awareness of the environment around them and its application to society. Questions are also designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General policy and scientific research.

Computer Proficiency:
Computer Basics: Organization of a computer, Central Processing Unit (CPU), input/ output devices, computer memory, memory organization, back- up devices, PORTs, Windows Explorer, Keyboard shortcuts.
Software: Windows Operating system including basics of Microsoft Office like MS word, MS Excel and Power Point etc.
Working with Internet and e-mails: Web Browsing & Searching, Downloading & Uploading, Managing an E-mail Account, e-Banking.

Basics of networking and cyber security: Networking devices and protocols, Network and information security threats and preventive measures.

English Language and Comprehension:
Vocabulary, grammar, sentence structure, synonyms, antonyms and their correct usage; Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting mis-spelt words, Idioms & Phrases, One word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion into Direct/ Indirect narration, Shuffling of Sentence parts, Shuffling of Sentences in a passage, Cloze Passage, Comprehension Passage. To test comprehension, two or more paragraphs will be given and questions based on those will be asked. At least one paragraph should be a simple one based on a book or a story and the other paragraph should be based on current affairs editorial or a report.

For Junior Secretariat Assistant Posts

Mathematical Abilities:
Number Systems: Computation of Whole Number, Decimal and Fractions, Relationship between numbers.
Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and Compound), Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time and work.
Algebra: Basic algebraic identities of School Algebra and Elementary surds and Graphs of Linear Equations.
Geometry: Familiarity with elementary geometric figures and facts: Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles.
Mensuration: Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square Base.
Trigonometry: Trigonometry, Trigonometric ratios, Complementary angles, Height and distances. Standard Identities.
Statistics and probability: Use of Tables and Graphs: Histogram, Frequency polygon, Bar-diagram, Pie-chart; Measures of central tendency: mean, median, mode, standard deviation; calculation of simple probabilities.

Reasoning & General Intelligence:
Questions of both verbal and non-verbal type. These will include questions on Semantic Analogy, Symbolic operations, Symbolic/ Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/ Number Classification, Drawing inferences, Figural Classification, Punched hole/ pattern-folding & unfolding, Semantic Series, Figural Pattern-folding and completion, Number Series, Embedded figures, Figural Series, Critical Thinking, Problem Solving, Emotional Intelligence, Word Building, Social Intelligence, Coding and de-coding, Numerical operations, Other subtopics, if any.

General Awareness:
Questions are designed to test the candidates' general awareness of the environment around them and its application to society. Questions are also designed to test knowledge of current events and of such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General policy and scientific research.

Computer Proficiency:
Computer Basics: Organization of a computer, Central Processing Unit (CPU), input/ output devices, computer memory, memory organization, back- up devices, PORTs, Windows Explorer, Keyboard shortcuts.
Software: Windows Operating system including basics of Microsoft Office like MS word, MS Excel and Power Point etc.
Working with Internet and e-mails: Web Browsing & Searching, Downloading & Uploading, Managing an E-mail Account, e-Banking.
Basics of networking and cyber security: Networking devices and protocols, Network and information security threats and preventive measures.

English Language and Comprehension:
Vocabulary, grammar, sentence structure, synonyms, antonyms and their correct usage; Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting mis-spelt words, Idioms & Phrases, One word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion into Direct/ Indirect narration, Shuffling of Sentence parts, Shuffling of Sentences in a passage, Cloze Passage, Comprehension Passage. To test comprehension, two or more paragraphs will be given and questions based on those will be asked. At least one paragraph should be a simple one based on a book or a story and the other paragraph should be based on current affairs editorial or a report.

Stage II: Indicative Syllabus for Skill Tests

For Technician (Civil Engg.) Post

Solid Mechanics:-
Tension test on Structural Materials: Mild Steel and Tor steel (HYSD bars), Compression Test on Structural Materials: bricks and concrete cubes, Bending Test on Mild Steel.
Concrete Technology:-
Tests on cement – specific gravity, fineness, soundness, normal consistency, setting time, compressive strength on cement mortar cubes.
Tests on fine aggregate – specific gravity, bulking, sieve analysis, fineness modules, moisture content, bulk density and deleterious materials.
Tests on coarse aggregate - specific gravity, sieve analysis, fineness modulus, bulk density.
Tests on Fresh Concrete: Workability : Slump, Vee-Bee, Compaction factor tests.
Hardened Concrete: Compressive strength on Cubes, Split tensile strength, Static modulus of elasticity, Flexure tests, Non-destructive testing (Rebound hammer & Ultrasonic pulse velocity).
Mix Design of Concrete.
Surveying:-
Chain survey, Compass survey, Theodolite survey, Use of EDM and total station.
Geotechnical Engineering:-
Determination of natural moisture content
Determination of specific gravity of i) Cohesionless ii) cohesive soil.
Determination of In-situ density by core cutter method & sand replacement method.
Grain size distribution of cohesion-less soil by sieving & fine-grained soil by hydrometer analysis.
Determination of Atterberg's limits (liquid limit, plastic limit & shrinkage limit).
Determination of co- efficient of permeability.
Determination of compaction characteristics of soil.
Determination of unconfined compressive strength of soil.
Determination of Shear parameter of soil by Direct shear test
Determination of shear parameter of soil by Triaxial test (UU)
Standard Penetration Test
Highway & Transportation Engineering:-
Tests on highway materials – Aggregates- Impact value, Los-Angeles Abrasion value water absorption, Elongation & Flakiness Index. Bitumen & bituminous materials: Specific gravity, penetration value, softening point, loss on heating, Flash & Fire point test. Stripping value test. CBR Test, Marshal Stability Test, Benkelman beam Test.
Environmental Engineering:-
Determination of turbidity for a given sample of water, Determination of colour for a given sample of water, Determination of solids in a given sample of water: Total Solids, Suspended Solids and Dissolved Solids, Determination of pH for a given sample of water, Determination of concentration of Chlorides in a given sample of water, Determination of carbonate, bi-carbonate and hydroxide alkalinity for a given sample of water, Determination of hardness for a given sample of water, Determination of concentration of Fluorides in a given sample of water, Determination of concentration of Iron in a given sample of water, Determination of amount of Dissolved Oxygen (DO) in a given sample of water.

For Section Officer Grade I and Grade II (Accounts) Posts

Financial Rules and Principles of Govt. Accounts (GFR 2017), Central Public Works Accounts Code, Fundamental Principles of Accounting, Accounting Process, Depreciation, Provisions and Reserves, Bill of Exchange, Promissory Notes and Cheques, Financial Statements, Government Accounting System, Rectification of Error, Bank Reconciliation Statement, Fixation of Pay and Pension, Pay Bill Preparation, Assets, Different Types of Assets, types of depreciation, rates of depreciation etc, Royalty and Lease Accounts, Utilization Certificates, Educational Institute Accounts including Consolidated Financial Statements, Uniform format for accounts for Central Autonomous Bodies, Accounts of Public Utilities Enterprises: Accounting formats, Banking Companies, Nonbanking Companies, Insurance companies, Transport Companies Branch and Departmental accounts (including Foreign Branch Accounts), Cash and Funds Flow Statement, Working Capital, Accounting Standards of ICAI /Ind AS notified by Ministry of Corporate Affairs and Concepts of interim reporting, Segment reporting, Corporate Social Responsibility; Computer test on Tally software, PFMS, Office Management, procedure and practice; Procurement of goods and services, GeM and others, Contract management etc.

For Junior Secretariat Assistant Posts

The candidates will be given:

(i) Qualifying, Computer Based Typing test for 10 minutes in English language at the minimum speed of 45 w.p.m.

(ii) Drafting in English language (50 minutes)

(iii) Computer Proficiency test on MS Office (60 minutes)

(a) The Syllabus for MS Office broadly covers the following topics: MS Word: Creating and managing documents, Formatting a document, Customizing Options and Views for Documents, Configuring Documents to Print or Save, Formatting Text, Paragraphs, and Sections, Creating Tables and Lists, Creating and Modifying a List, Applying References, Inserting and Formatting Objects.

(b) MS Excel: Creating and Managing Worksheets and Workbooks: Creating Worksheets and Workbooks, Navigating Through Worksheets and Workbooks, Formatting Worksheets and Workbooks, Customizing Options and Views For Worksheets and Workbooks and Configuring Worksheets and Workbooks to Print Or Save. Cells and Ranges: Inserting Data in Cells and Ranges, Formatting Cells and Ranges and Ordering and Grouping Cells and Ranges. Tables: Creating and Modifying Table. Formulas and Functions: Applying Cell Ranges and References in Formulas and Functions. Charts and Objects: Creating and Formatting a Chart and Inserting.

(c) MS Power Point: Create and Manage Presentations: Creating A Presentation, Formatting A Presentation Using Slide Masters, Customizing Presentation Options and Views, Configuring Presentations to Print or Save and Configuring and Present Slideshows. Inserting and Formatting Shapes and Slides: Inserting and Formatting Slides, Inserting and Formatting Shapes and Ordering and Grouping Shapes and Slides. Creating Slide Content: Inserting and Formatting Text, Inserting and Formatting Tables, Inserting and Formatting Charts, Inserting and Formatting Smart Art.

Sd/-
Director, NITTTR Kolkata