RITES LIMITED
(A Govt. of India Enterprise)
Shikhar, Plot No. 1, Sector – 29, Gurgaon – 122001

Recruitment of engineering professionals on regular basis

RITES Ltd., a Mini Ratna Central Public Sector Enterprise under the Ministry of Railways, Govt. of India is a premier multi-disciplinary consultancy organization in the fields of transport, infrastructure and related technologies.

RITES Ltd. is in urgent need of dynamic and hard working professionals as under:

VC No.	Post	No. of Vacancies					
		UR	EWS	OBC (NCL)	SC	ST	Total
54/23	Engineer (Geo Technical)	3	-	-	-	-	3
55/23	Engineer (Structural Engineering)	4	-	-	-	-	4*
56/23	Engineer (Urban Engineering)	4	-	-	-	-	4*
57/23	Engineer (Architecture)	3	-	-	-	-	3*
58/23	Engineer (SHE expert)	2	1	-	-	-	3

*1 post each reserved for PwD category on horizontal basis in each of the asterisked vacancies

Category wise and post wise details of 3 vacancies reserved for Persons with Benchmark Disabilities (PwBDs) are given below:

VC No.	Post	Reserved for identified categories of Persons with Benchmark Disabilities (PwBDs)				
		Cat-a	Cat-b	Cat-c	Cat-d&e	Total PwBD
55/23	Engineer (Structural Engineering)		1	-	-	1
56/23	Engineer (Urban Engineering)	-	-	-	1	1
57/23	Engineer (Architecture)	-	-	1	-	1

Age Limit

Maximum Age	Cut-off date for calculation of Age
32 Years	01.03.2023

Minimum Qualifications & Experience

VC No	Designation & Pay Scale (Rs.)	Minimum Qualification*	Minimum post - qualification experience

54/23	Engineer (Geo Technical) (Rs. 40, 000 –1, 40, 000)	Full time Bachelor's Degree in Civil Engineering AND Master's Degree in Geo-technical engineering/ Rock Engineering & underground structure/Soil Mechanics & Foundation Engineering	2 Years
Experience is defined as under: Candidate must have minimum 2 years of post-qualification experience in the field of Ground Investigation Works, Geological borehole logging, geotechnical investigation and in situ geotechnical testing including analysis of data and preparation of Geo-Technical/ Geological & interpretative reports for bridges & other large infrastructure projects.			
VC No	**Designation & Pay Scale (Rs.)**	**Minimum Qualification***	**Minimum post - qualification experience**
55/23	Engineer (Structural Engineering) (Rs. 40, 000 –1, 40, 000)	Full time Bachelor's Degree in Civil Engineering AND Master's Degree in Structural Engineering	2 Years
Experience is defined as under: Candidate must have minimum 2 years of post-qualification experience in the field of structural designs and drawings for concrete/ steel works, Rail-Road over bridges (ROBs), pre-stressed concrete bridges, balanced cantilever bridges, steel bridges, foot-over bridges (FOB), elevated segmental structures/ continuous bridges, metro structures i.e. Stations, viaducts, tunnels etc.			
VC No	**Designation & Pay Scale (Rs.)**	**Minimum Qualification***	**Minimum post - qualification experience**
56/23	Engineer (Urban Engineering) (Rs. 40, 000 –1, 40, 000)	Full time Bachelors' degree in Environmental Engineering / Full time Bachelor's degree in any branch of Engineering with Master's degree in Environmental Engineering/ Environmental Science/Environmental Management / Environmental Planning/Sustainability	2 Years
Experience is defined as under: Candidate must have minimum 2 years of post-qualification experience in leading and /or monitoring/ supervising construction stage Implementation of EIA and EMP requirements of large infrastructure projects.			
VC No	**Designation & Pay Scale (Rs.)**	**Minimum Qualification***	**Minimum post - qualification experience**
57/23	Engineer (Architecture) (Rs. 40, 000 –1, 40, 000)	Full time Bachelor's Degree in Architecture / Full time Master's Degree in Architecture/Planning/ Urban Design	2 Years
Experience is defined as under: Candidate should have minimum post-qualification experience of 2 years in relevant field of Architectural design.			
VC No	**Designation & Pay Scale (Rs.)**	**Minimum Qualification***	**Minimum post - qualification**

			experience
58/23	Engineer (SHE expert) (Rs. 40, 000 –1, 40, 000)	Full time Bachelor's Degree in any branch of Engineering AND Diploma/Degree in industrial safety/BE/B. Tech in safety/Master's Degree in Environmental Engineering/Sciences/International Qualifications like CSP (Certified safety professional), NEBOSH Diploma, Grad IOSH, CMIOSH.	2 Years
Experience is defined as under: Candidates should have at least 2 years' experience in supervision of safety works.			

*Candidates belonging to UR/EWS category (and candidates belonging to SC/ST/OBC(NCL)/PWD applying against unreserved posts) should have first class degree/ minimum 60% marks in Minimum Qualification for consideration against unreserved posts.

Reserved category candidates (SC/ST/OBC(NCL)/PWD as applicable) should have at least 50% marks in Minimum Qualification for consideration against reserved posts.

Educational Qualification shall be as on 01.03.2023.

Note for Educational Qualification:

The candidate should possess Degree recognized by AICTE; from a University incorporated by an Act of Central or State legislature in India or other Educational Institutions established by an Act of Parliament or declared to be Deemed as University under Section 3 of the University Grants Commission Act, 1956. Sections A & B examination of the Institution of Engineers (India) which is treated as equivalent to Degree by Govt. of India, and recognized by AICTE shall also be accepted.

Selection Process

On the basis of applications received, eligible candidates will be required to appear in the written test (Off-Line/On-Line). The candidates may be shortlisted for selection on the basis of performance in the written test. The company reserves the right to shortlist the number of candidates for selection out of eligible candidates. Due to prevalent pandemic situation, based on the requirement and discretion of RITES, selection process may be conducted online.

Based upon the performance in the Written Test and fulfilling the conditions of eligibility; candidates shall be shortlisted for Interview.

The weightage distribution of various parameters of the selection shall be as under:

Experience	-	5%
Written Test	-	60%
Interview	-	35%

(Technical & Professional proficiency - 25 %; Personality Communication & Competency – 10%)

Total	-	100%

A minimum of 50% marks for UR/ EWS (45% for SC/ST/OBC (NCL)/PWD against reserved posts) in written test and a minimum of 60% marks for UR/ EWS (50% for SC/ST/OBC (NCL)/ PWD against reserved posts) in

interview will be required to enable the candidate to be considered for placement on panel. There will be no minimum qualifying marks required in the aggregate.

There will be 125 objective type question carrying one mark each for a duration of 2.5 Hours. There will be no negative marking system applicable and therefore, no marks will be deducted in case of incorrect answer.

Appointment of selected candidates will be subject to their being found medically fit in the Medical Examination to be conducted as per RITES Rules and Standards of Medical Fitness for the relevant post.

Candidates have the option to appear for interview either in Hindi or English.

Relaxations & Concessions

Reservation/ relaxation/ concessions to EWS/ SC/ST/OBC (NCL)/PWD/ Ex-SM/ J&K Domicile would be provided against reserved posts (where applicable) as per extant Govt. orders.

Relaxation in upper age limit to OBC (NCL)/ SC/ ST candidates shall be provided against reserved posts as per extant Govt. orders.

RITES regular/contract employees fulfilling the educational qualification and experience criteria shall be given age relaxation of 5 years, over and above the upper age limit indicated above.

PWD candidates suffering from not less than 40% of the relevant disability shall only be eligible for the benefit of PWD. Such PWD candidates shall be eligible for relaxation of 10 years in upper age limit.

PWD candidates will have to meet the Physical Requirements and Functional Classifications which have been identified for the post as under:

Categories for which identified	Functional Classification	Physical Requirements
Locomotor disability	OA, OL, Leprosy Cured, Acid Attack Victims	S, ST, BN, W, SE, MF, C, RW, KC, CL, JU, H
Hearing Impairment	HH	

Persons with Disabilities belonging to the category/ categories for which the post is identified (as indicated in Table above) can also apply even if no vacancies are specifically reserved for them. Such candidates will be considered for selection for appointment to the post by general standard of merit.

Functional Classification: Physical Requirements:

Code	Functions
OH	Orthopaedically Handicapped
VH	Visually Handicapped
HH	Hard of Hearing
OL	One leg
OA	One arm
BA	Both Arms
BH	Both Hands
MW	Muscular Weakness
OAL	One arm one leg
BLA	Both Legs and Arms
BLOA	Both Legs one Arm

LV	Low Vision
B	Blind
PD	Partially Deaf
FD	Fully Deaf
BL	Both legs
D	Dwarfism
CP	Cerebral Palsy
LC	Leprosy Cured
AAV	Acid Attack Victims
MD	Multiple Disabilities

Code	Physical Requirements
S	Sitting
ST	Standing
W	Walking
SE	Seeing
H	Hearing/ Speaking
RW	Reading and Writing
C	Communication
MF	Manipulation by fingers
PP	Pulling & Pushing
L	Lifting
KC	Kneeling & Crouching
BN	Bending
M	Movement
JU	Jumping
CL	Climbing

The above lists are subject to revision.

Nature & Period of Engagement

The appointment will be initially on probation for a period of one year.

Selected candidates shall be liable for posting to any place in India as per requirements of the Company.

Candidates will be required to clear the screening test for confirmation of their services at the end of the probation period. Those who fail to qualify in the screening test, their probation period may be extended, and further action taken in accordance with the policy of the Company.

Candidates may also note that no application of an employee would be forwarded for jobs outside until he/ she completes 2 years of service in the Company.

Remuneration

The pay would be fixed at the minimum of the scale. Candidates from Government Departments/ PSUs are eligible for protection of their Basic Pay in accordance with the policy of the Company. In addition to Basic Pay candidates would be paid DA, Fixed/variable allowances as applicable to the scale, Performance Related Pay, Medical facilities, HRA/Lease accommodation, attractive superannuation package consisting of contribution to PF, Gratuity as per Gratuity Act and Post-Retirement Medical Scheme. Other benefits would be as under:

a) Leaves as per leave rules
b) Maternity Leave/ Paternity Leave
c) Medical facility.
d) Group Insurance.
e) Leave Encashment.

) As per company rules applicable to Regular employees.

The approximate emoluments at the minimum of the pay-scale is ₹ 13.60 LPA.

Remuneration mentioned above is only indicative. Actual remuneration shall depend upon place of posting and other terms & conditions of appointment.

Fees

The candidates will have to deposit the under mentioned amount of fees during online application:

Category	Fee
General/OBC Candidates	Rs. 600/- plus Taxes as applicable
EWS/ SC/ST/ PWD Candidates	Rs. 300/- plus Taxes as applicable

For any difficulty/ queries regarding fee payment, candidates may contact on following only:

Helpdesk No: 011 – 33557000, Extension Code - 13221

Helpdesk e-mail id: pghelpdesk@hdfcbank.com

Note:

a) Candidates should note that the fee submitted through any other mode except the mode specified, will not be accepted by RITES and such applications will be treated as without fee and will be summarily rejected.

b) Persons with disabilities are given concession in the fee provided they are otherwise eligible for appointment. A PWDs candidate claiming age relaxation/fee concession will be required to submit along with their Detailed Application Form, certified copy of the PWD certificate as per latest GOI format.

How to Apply

1. **Before applying candidates should ensure that they satisfy the necessary conditions and requirements of the position.**

2. Interested candidates fulfilling the above laid down eligibility criteria are required to apply online in the registration format available in the Career Section of RITES website, http://www.rites.com.

3. While submitting the online application; the system would generate 'Registration No.' on top of online form filled up by the candidate. Note down this "Registration No." and quote it for all further communication with RITES Ltd.

4. While filling up the required details, candidates are advised to carefully and correctly fill the details of "Identity Proof". Candidates are also advised to note the same and ensure the availability of the same Identity Proof as it will be required to be produced in original at later stages of selection (if called).

5. **After filling up the required details under the "Fill/ Modify Application Form", click on "Make payment". The payment details show the amount to be paid to the bank based on your category.**

   Applications without successful fee payment shall be treated as incomplete and shall be summarily rejected.

6. A copy of this online **APPLICATION FORM** containing the registration number is to be printed, signed, and furnished online, along with **SELF-ATTESTED SCANNED COPIES** of the following documents in the given order only (from top to bottom):
   a. 2 recent passport size colour photographs
   b. High School certificate for proof of Date of Birth
   c. Certificates of Academic & Professional qualifications and statements of marks of all the qualifications for all semesters/years (Xth, XIIth, Diploma/ Graduation/ Post-Graduation as applicable)
   d. EWS/ SC/ST/OBC Certificate in the prescribed format by Govt. of India (if applicable)
   e. Proof of Identity & Address (Passport, Voter ID, Driving Lisence, Aadhaar Card etc)
   f. PAN Card
   g. Proof of different periods of experience as claimed in the Application Form (if applicable)

h. Any other document in support of your candidature
i. PWD Certificate as per latest format (if applicable).

All the above documents are to be uploaded on the RITES Website under career section; within the date specified for the purpose.

The scan copy of the documents should be of good quality and clearly visible.

7. Please attach copies of experience certificates from your previous employment in respect of claims made by you in your application. In respect of current employment, **experience certificate/ joining letter along with last months' salary slips, or, Form 16 and other documents** which clearly prove your continuity in the job are to be attached. In case your claim is not established from the proofs submitted by you; your application is liable to be rejected. Please check your claims and certificates submitted by you carefully. Incomplete application, or, insufficient proof would entail rejection of your application. No claims would be entertained at a later stage.

8. **For proof of CTC/ salary, candidates shall have to submit a copy of their last Form No. 16/ Earning Card/ salary slip/ Appraisal letter/ any other suitable document.**

9. Community certificate (SC/ST/OBC) should be in the format prescribed by Government of India only. OBC candidates included in the Central List with certificate not more than 12 months old (with clear mention of candidate not belonging to "Creamy Layer") in the GOI prescribed format only will be considered for the posts reserved for OBC. EWS certificate should also be as per Gov. of India format

10. **Hard copies of documents are not to be sent to this office through post/ courier. Documents are to be uploaded on RITES Website through portal only.**

11. The candidates are also advised to keep a copy of Application Form submitted with them and to carry the same at the time of the Interview (if called).

12. **Candidates who have registered online but whose application along with aforesaid documents is not received online on or before the due date, their candidature may not be considered.** The company reserves the right to consider only such applications which are received online by the prescribed date.

13. Applications received after the last date of receipt of Application Form and documents shall be rejected. RITES Ltd. does not bear any responsibility for any delay in post/courier for any reason whatsoever.

14. The **original testimonials/documents along with one self-attested copy** will have to be produced by the candidate(s) at the time of interview (if called).

15. Departmental Candidates of RITES are required to apply online and submit their hard copy through proper channel.

16. Candidates working in Government Departments/ PSU are required to apply through proper channel. The candidates who apply directly would have to bring NOC from their employer at the time of Interview (if called) so as to consider their claims under technical resignation category.

17. Candidates not fulfilling the minimum laid down criteria advertised with respect to educational qualifications, age, and experience for selection to the respective post, would not be able to register online.

18. Candidates should submit only one application for one vacancy and application once submitted cannot be altered. A valid e-mail ID is essential for submission of the online application. RITES will not be responsible for bouncing of any e-mail sent to the candidates. However, candidates can apply for any number of vacancies.

19. The candidates must submit all the details pertaining to his candidature viz. personal details,

educational qualification details, experience details, category etc. Suppression, in this regard, if any, detected on a future date shall render the candidature liable for forfeiture.

20. If any claim made by a candidate is found to be incorrect, his/her candidature shall be summarily rejected.

Venue & Time

S. No.	Selection Round	Venue & Date
1	Written Test	6 different locations across India* (Exact address shall be communicated to the candidates later)
2	Interview (Subject to performance in Written Test)	Venue for the Interview shall be communicated to shortlisted candidates

Candidates are required to give two preferences for their choice of center for the Written Test at the time of online application. Although efforts shall be made to allot a center of choice to the candidates, however RITES reserves the right to allot to a candidate a center which was not indicated as his preference.

Test Centers for Written Test*:

S. No.	City
1	Delhi/Gurgaon
2	Kolkata
3	Chennai
4	Mumbai
5	Hyderabad
6	Nagpur

***All centers except Delhi/ Gurgaon are tentative and will depend on number of candidates and discretion of RITES.**

Exact Date, time and details of venue of the selection shall be communicated to shortlisted candidates.

Syllabus for Written Test

VC No. 54/23 - Engineer (Geo Technical)

Description	
Soil Mechanics	Three-phase system and phase relationships, index properties; Unified and Indian standard soil classification system
	Permeability - one dimensional flow, Seepage through soils - two - dimensional flow, flow nets, uplift pressure, piping, capillarity, seepage force
	Principle of effective stress and quicksand condition

	Compaction of soils; One- dimensional consolidation, time rate of consolidation
	Shear Strength, Mohr's circle, effective and total shear strength parameters
	Stress-Strain characteristics of clays and sand; Stress paths
Foundation Engineering	Sub-surface investigations - Drilling bore holes, sampling, plate load test, standard penetration and cone penetration tests
	Earth pressure theories - Rankine and Coulomb; Stability of slopes - Finite and infinite slopes, Bishop's method
	Stress distribution in soils - Boussinesq's theory; Pressure bulbs, Shallow foundations - Terzaghi's and Meyerhoff's bearing capacity theories, effect of water table
	Combined footing and raft foundation; Contact pressure
	Settlement analysis in sands and clays
	Deep foundations - dynamic and static formulae, Axial load capacity of piles in sands and clays, pile load test, pile under lateral loading, pile group efficiency, negative skin friction
Rock Engineering	Physio-mechanical properties of rocks; laboratory and field tests, Rock mass classification, Initial stresses in rocks and their measurement
	Stress-strain behaviour, Failure criteria for intact rock and rock masses, Analysis and design of underground openings, Elastic and elasto-plastic approach, Stress concentration for different shapes of opening, Planes of weakness in rocks, rock fracture and joints. Stability of rock slopes
	Modes of failure, Foundations on rock, Rock support and reinforcement, tunnel supports. Rock Blasting, Numerical modelling of rocks, rock masses and rock structures. Instrumentation and monitoring
Soil Dynamics	Study of vibrations; Mathematical modelling; Sources of vibration; Distinction between static and dynamic problems; Nature of different types of dynamic loads; Significance of soil-structure interaction; Basic principles of soil dynamics - An Introduction; Fundamentals of vibration theory
Ground Improvement Techniques	Engineering properties of soft, weak and compressible geomaterials; Principles of treatment; Methods of soil improvement-lime stabilization and injection
	Preloading and vertical Drains; Dynamic Consolidation; Granular piles; Soil nailing; Anchors; Deep mixing and Grouting; Electro-osmosis
Geosynthetics & Reinforced Soil Structures	Different varieties of geosynthetics and their applications; Types of polymers and manufacture of geosynthetics; Testing of geosynthetic properties; Strength mechanisms of reinforced soil.
	Design of foundation beds using geosynthetics; Application of geosynthetics in flexible pavements Et design using geosynthetics; Design and construction of reinforced soil retaining walls

VC No. 55/23 - Engineer (Structural Engineering)

Description	
Structural Analysis	Beam:- Types of Supports, Shear Force and Bending Moment, Shear Force and Bending Moment Diagrams, Graphical Method of Plotting S.F. and **B.M.** Diagrams. Beams: - Deflections by Moment Area Method and Conjugate Beam Method, Slope and Deflection for Cantilever and Simply Supported Beam, Analysis of Fixed Beam and Continuous Beams. Column analysis with different support condition, column carrying eccentric load, laterally loaded column, effective height, short column, slender column. Deflection of framed structures Moving loads on beam/frames, influence lines for bending moment and shear force in members of framed structure. Moment distribution and slope deflection methods
Design of Reinforced Concrete Structures	Method of Design - Working Stress Method, Ultimate Load Method, Limit State Method Singly and Doubly Reinforced Beams and slabs, columns Shear Stress, Diagonal Tension, Shear Reinforcement, Development Length, Anchorage Bond, Flexural Bond
Design of Steel Structures	Stress strain curve for mild steel, rolled steel section, loads, permissible stresses, working stresses, factor of safety minimum thickness of structural members, Design methods. Compression Members-Effective length, Slenderness ratio, Column design, Types of sections, assumptions, Design of Axially loaded compression members Tension Members-Net sectional area, Permissible stress, Design of axially loaded tension member Design of Plate girder - bending, shear, economical depth. Welded joints, types of welds, design of fillet weld, design of butt weld.
PRESTRESSED CONCRETE STRUCTURES	Specification of materials, methods of prestressing, losses, analysis, and design of members for moment and shear, stresses in anchorage zones of pretensioned and post tensioned members, design of end block, prestressed concrete compression members, partial prestressing, composite construction with prestressed concrete and reinforced concrete, two-way prestressing, Short term deflections of uncracked members, Prediction of long- term deflections, Review of Indian code.

DESIGN OF BRIDGES	Introduction and Type of Bridges, Introduction to bridge codes. Site investigation and planning- Factors affecting scour and its evaluation. Analysis and Design of Bridge foundations - open, pile, and well. Analysis and Design of Piers, abutments, and approach structures; Superstructure - analysis and design of right, skew, and curved slabs. Steel, RCC and PSC Girder bridges - types, load distribution, design. Steel - Concrete composite bridges: load distribution, design philosophy, shear connectors with relevant Indian Codes such as IS, IRC and IRS etc. Detailing with relevant Indian Codes. Introduction to long span bridges - cantilever, arch, cable stayed and suspension bridges, etc.
STRUCTURAL DYNAMICS ft EARTHQUAKE ENGINEERING	Introduction - Single and multi-degree freedom systems, undamped and damped systems, numerical integration scheme, modal analysis for undamped and damped systems. Characteristics of earthquake, Earthquake response of structures, Concept of earthquake resistant design. Codal provision for design of buildings, masonry structures and bridges etc, liquefaction, Detailing earthquake resistant structures with relevant Indian Codes.
DESIGN OF TALL AND INDUSTRIAL STRUCTURES	Design philosophy, loading, and materials and design mixes. Loading and Movement: Gravity loading: Dead and live load, methods of live load reduction, Impact, Gravity loading, Construction loads. Wind loading: static and dynamic approach. Earthquake loading: Equivalent lateral force, modal analysis, combinations of loading, Limit state design. Analysis and Design: Modelling for approximate analysis, accurate analysis and reduction techniques, analysis of building as total structural system considering overall integrity and major subsystem interaction, analysis for member forces; drift and twist, Yield line method of design of slabs. Design of flat slabs and Design of continuous beams with redistribution of moments. Analysis of industrial building for Gravity and Wind load. Analysis and design of framing components namely, girders, trusses, gable frames. Analysis and design of gantry column (stepped column / column with bracket), purlins, girts, bracings including all connections. Analysis and Design of foundations - Isolated, Raft and Pile. Concept of Pre- engineered buildings.
REPAIR AND REHABILITATION OF STRUCTURES	Introduction, Cause of deterioration of concrete structures, Diagnostic methods ft analysis, preliminary investigations, experimental investigations using **NOT,** load testing, corrosion mapping, core drilling and other instrumental methods, Quality assurance for concrete construction, as built concrete properties strength, permeability, thermal properties, and cracking. Assessment procedure for evaluating a damaged structure, causes of deterioration, testing techniques

VC No. 56/23 - Engineer (Urban Engineering)

Description	
Environmental Studies	Ecosystems, Natural Resources, Biodiversity and its conservations
Environmental Pollution	Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Solid waste management, composting and vermiculture, Urban and industrial wastes, recycling and re-use.
Environmental Acts and International Conventions	• Water (Prevention and Control of pollution) act, Air (Prevention and Control of pollution) act, Environmental protection act, Wild life protection act, Forest Conservation act • Stockholm Conference, Earth Summit, Kyoto Protocol, Paris Agreement and COP meetings
Environmental Impact Assessment	• Screening, IEE and EIA • Need of EIA and Type of EIAs • EIA process and project cycle • Acts and Legislations • EIA Components and process • EIA Methodology • Baseline, Environmental Impacts, Management Plans, Monitoring plans
Air Pollution	• Emission and Dispersion • Ambient Air quality standards for residential, commercial, industrial and sensitive areas, • Photochemical reactions • Greenhouse gases and effects • Global Warming • Decarbonization/NetZero
Solid Waste Management	• Collection, segregation, transportation, treatment and disposal techniques • Population forecast; Estimation of Solid Waste • Selection of Dumping site • Concept of 4 "R"

Water Supply Engineering	• Water demands: Factors affecting water demands, Population forecast, • Identification of Water sources • Water treatment Methods: treatment Methodology indicating various flow diagrams as per the characteristics of raw water, slow sand filter, rapid sand filter and disinfections • Transmission of water: Conveyance mains, water hammer, air valves • Water supply networks: Residual pressure, water hammer, air valves, staging height, • Selection of pipe materials and valves
Sewerage System And Sewer System	• Estimation of waste water flow: source and per capita waste water, Peak factor • Sewerage network: design concept • Sewage characteristics and various treatment methods and flow diagrams • Sewage treatment methods: activated sludge process, oxidation pond, oxidation ditch and USBR • Sludge drying beds • Disposal of Treated Water: In-Land disposal, stream/river
Storm Water Design	• Estimation of Runoff • Infiltration: Impervious factors, • Peak Factors • Type of Drains: Rectangular, Trapezoidal and Circular • Outfall Points

VC No. 57/23 - Engineer (Architecture)

Description

1. Building construction	A-Masonry Methods by which walls are built in stone brick in combination of stone and brick. Method of bonding brick and stone arches, lintels, chhajjas brick and stone Footing. B-Doors windows & Partitions Design consideration TW and pressed metal frames, method of fixing, Various types of shutters such as ledged and battened, paneled, glazed and flush etc. Fixtures & Fastenings TW windows, glazing louvered type, ventilators etc. Simple TW partitions. Partitions & variations such as flush, glazed, paneled type. C-Staircases Design principles, Types of staircases, finishes, railings, parapets RCC staircase. General idea of wooden and stone staircases. D-Flooring and Roofing General idea of Timber roofing & flooring. Various spans and timber trusses slopping roof in RCC with various finishes and covering, waterproofing for terraces.
2. Surveying & Estimation	A-Surveying & Leveling Different types of surveying methods, chain & compass survey, plotting methods, methods of leveling, reduction levels and checks, types of levels, temporary adjustments, contours, theodolite and its use. B-Estimating Taking out quantities from foundation to roof of a simple building or a part of building and preparing bill of quantities.
3. Building Materials & Specifications	A - Building Materials I. Bricks : Different types, properties and essential qualities II. Stone : Different types, suitability and properties III.Timber : Classification, method of cutting, defects, seasoning, Preservation, protection against termite IV. Iron : Cast iron, wrought iron, mild steel, stainless steel their properties and use in buildings V. Glass : Types of glass, ingredients, and forms, properties use in buildings VI. Cement & Lime : Types of cement its properties and use in buildings Types of lime mortars, types of concretes, various mixes and properties VII. Finishing Materials: Various cladding and paving

	materials, various types of Paints, varnishes, application, various materials for ceiling, partitions, Roof coverings, fittings & fixtures
	B - Specifications I. Specifications for Materials Importance of specification in the building activities, method of writing in correct order and sequence, Indian standard Specifications. Specification for materials such as bricks, stone, timber, flooring, cladding and roofing materials, glass, cement, sand and lime, fixtures and fastenings. II. Specification for Construction Specification for steel and concrete structures, ceilings, partitions, demolition work temporary structures such as stalls, sheds, gateways etc.
4. Building Services	A- Ventilation
	Natural & Mechanical ventilation, condition of comfort, Central air conditioning system, AC Duct & distribution, AHU split air-conditioning, packages units windows unit etc. B -Vertical Transportations
	Electrical passenger lifts, elevators, Provision of National Building Code & design Consideration, escalators, working & space requirements
	C – Fire hazards & regulations:
	Fire alarms, fire escape staircase & other provisions of National Building Code D – Sewage & Refuse disposal
	General ideas of sewage disposal methods. Recycling of waste. Disposal methods of city refuse etc.
5. Architecture Design	Simple problems of site planning requiring study of entrance, exit, parking etc. on a level of ground/contour, Building interior layout of various rooms e.g. Executive cabin, Board/Conference Rooms, Work stations, Drawing/Dining rooms, Master Bed Rooms etc. showing various facilities like attach toilet, computer, OHP etc. (where required)
6. History of Architecture	i) Indus Valley Civilization, Timber architecture of Vedic and early Mauryan period. Buddhist rock cut caves and temples, Hindus Chanakya, Indo Aryan and Dravidian, Jain temples. ii) Islamic Architecture in Indian from 1000 A.D up to Moghul period in 18th century iii) British colonial and modern Indian architecture iv) General idea only of the developments in the west, mainly in Europe v) Egyptian, West Asiatic, Greek, and Roman architecture vi) Mediaeval, Renaissance, and premodern architecture
7. Climatology	Elements of Climate i) Effect of weather on human body, heat gain- and loss. Micro and Macro climate ii) Study of sun path, wind & rain etc. & their effect to building surfaces

	iii) Design of louvers, fins, chhajjas, grills, courtyard, Orientation of Buildings iv) Use of solar energy for heating, solar panels, evaporative cooling v) Study of well-known examples in Indian Context with reference to Climatic Regions such as hot & dry, hot & humid coastal, hilly situations etc.
8. Professional Practice	i) Conditioning of engagement, charging of fees, professional ethics, competitions arbitration etc. ii) The Architect and his work iii)Conditions of engagement and scale of professional fees and charges iv)Regulations governing the promotion and conduct of Architectural Competitions v)Code of Conduct vi) Building Bye laws & Code

VC No. 58/23 - Engineer (SHE Expert)

- General Aptitude / General Knowledge / General Awareness/Latest events etc.
- General workers amenities for Construction sites.
- Housekeeping [Stacking of materials], P&M (Plants & Machineries), Various safety trainings, Audits & Safety Inspections
- while working in Urban Areas, Barricading, Utilities etc.
- Working at height, fall protection, platform, temporary structures, Access.
- Mobile Elevated working platform (MEWP).
- Lifting Appliances and Gear, means crane hoist machinery, derrick, winch, Hoist drum, Pulley block. Test and periodical examination of lifting appliances & Gears, ASLI (Automatic safe load Indication).
- Electricity, Assessment & Power Strength and capability of electrical equipment.
- **Distribution Systems**: 3 Phase and Single Phase and low voltage of 110 Volt for lighting Electrical protection System ELCB/RCCBs earthing of Electrical Equipment.
- **Industrial Cables:-** Working near H.T. Lines, Site illumination Near
- Welding, Gauging and Cuttings.
- Deep Excavations (More than 1.5 mtr)
- Works permit system, for Hot work heavy lifting permit.
- Entry to confined spaces, tendons lifting- Traffic Diversion / Traffic management PPEs (Personal Protective Equipment).
- Requirements of ISO 45001:2018

General Instructions

1. Management reserves the right to cancel/ restrict/ enlarge/ modify/ alter the selection/ recruitment process at any stage, without issuing any further notice or assigning any reason thereafter.
2. The number of vacancies may vary.
3. Departmental candidates of RITES and candidates working in Government Departments/ PSU shall be allowed to join RITES only after being properly relieved from their parent organization.
4. Before applying, the Candidates must satisfy themselves about their eligibility for the post applied for.
5. In case it is detected at any stage of recruitment that a candidate does not fulfill the eligibility norms and/or that he/she has furnished any incorrect/false information or has suppressed any material fact (s), his/her candidature is liable for cancellation. If any of these shortcomings is/are detected even after appointment, his/her services are liable to be terminated.
6. **Any corrigendum/addendum to this advertisement will be displayed only on the Company's website www.rites.com.Therefore, applicants are advised to keep checking the Company's website for any update.**
7. The period of training/internship shall not be counted towards post qualification experience.
8. Legal jurisdiction will be Delhi in case of any dispute
9. No train/bus fare / TA / DA shall be payable.
10. In case a candidate is found suitable for a lower post than for which he/she has applied, he/she shall only be considered for the post for which he/she has been found suitable by the selection committee.

Communication with RITES

Any information regarding this recruitment process would be made available on the e-mail address provided by the candidate at the time of registration and/or shall be uploaded on RITES website. Candidates are advised to periodically check the Career section of RITES website for further updates.

Candidates are encouraged to go through the detailed advertisement and read the "Frequently Asked Questions (FAQs)" uploaded on RITES website under Career section to solve their queries.

Queries if remaining should be sent to rectt@rites.com only and contain the following particulars:

i. VC No.
ii. REGISTRATION/ROLL NO.
iii. NAME OF CANDIDATE IN FULL AND IN BLOCK LETTERS.
iv. Valid email address as given in the application

Communications not containing above particulars shall NOT BE ATTENDED TO.

Any query/ issue should be brought to notice of RITES well in advance of the due date. RITES will not be responsible for non-submission of application due to issues brought to notice at the last moment.
Queries related to information already provided in the advertisement shall not be attended to.

Important Dates

S. No.	Particular	Date
1	Commencement of submission of online application and online payment of fees	03.03.2023
2	Last date of submission of online application and online	27.03.2023

	payment of fees	
3	Last date of submission of documents through RITES portal	27.03.2023
4	Date of selection	To be notified later