

	<ul style="list-style-type: none"> <li>• Application fee once paid shall not be refunded or shall not be adjusted in any subsequent Recruitment Process, under any circumstances.</li> <li>• No other mode of payment i.e., Demand Draft, Money Order, Postal Order, Cheque etc. is acceptable.</li> </ul>
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### INFORMATION ABOUT ON LINE APPLICATION

On-line application form will be available on company web site.	<a href="http://www.gsecl.in">www.gsecl.in</a>
On-line submission of application commences	<b>1<sup>st</sup> January, 2020</b>
Last date for On-line submission of application	<b>21<sup>st</sup> January, 2020 (21 Days after commencement)</b>
<b>Important Dates</b>	The last date of On-line application is <b>21<sup>st</sup> January, 2020 06.00 p.m.</b>
<b>General</b>	Knowledge of Gujarati is essential.

### Terms & Conditions

<b>A.</b>	<b>On-line Application</b>
1.	Candidates are required to apply <b><u>On-line Application</u></b> only through <a href="http://www.gsecl.in">www.gsecl.in</a>
2.	The candidates shall have to generate application number by registering on line by filling up the On-line Application Form and follow step by step instructions.
3.	The link for On-line Application will open from <b>01.01.2020</b> . Interested candidates meeting with above criteria may apply “On-line” on or before <b>21.01.2020 before 06.00 P.M.</b>
4.	Candidates are requested to apply only if they are fulfilling requisite criteria and willing to work for fixed tenure of Five years. Since, we are not seeking all the documents at the time of application; candidate has to doubly ensure that he fulfills all the requisite criteria. All the documents of selected Candidates shall be verified at appropriate stage and if found not fulfilling any criteria, his candidature shall be cancelled immediately and his shortlisting in selection list shall not be a ground for claiming employment/ recruitment.
5.	Candidates who have completed all the tasks of On-line Application process shall only be considered for further selection process. However, mere submission of application does not guarantee the adequacy of candidature for being considered for further selection process.
<b>B.</b>	<b>Exam</b>
1.	<p>The exam will be conducted by On-line mode considering the no. of candidates registered.</p> <p>The tentative syllabus for the exam will be including but not limited to following topics and emphasis could differ.</p> <p><b><u>VIDYUT SAHAYAK – JUNIOR ENGINEER (ELECTRICAL)</u></b></p> <p><b>Section : I General Knowledge (10%)</b></p> <p><b>Section : II English Knowledge (10%)</b></p>

**Section : III Electrical Engineering covering following topics (60%)**

- Engineering Mathematics
- Electric Circuits
- Electromagnetic Fields
- Signals and Systems
- Electrical Machines
- Power Systems
- Control Systems
- Electrical and Electronics Measurements
- Analog and Digital Electronics
- Power Electronics

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

**VIDYUT SAHAYAK – JUNIOR ENGINEER (MECHANICAL)**

**Section : I General Knowledge (10%)**

**Section : II English Knowledge (10%)**

**Section : III Mechanical Engineering covering following topics (60%)**

- Engineering Mathematics
- Applied Mechanics and Design
  - Engineering Mechanics
  - Mechanics of Materials
  - Theory of Machines
  - Vibrations
  - Machine Design
- Fluid Mechanics and Thermal Sciences
  - Fluid Mechanics
  - Heat-Transfer
  - Thermodynamics
  - Applications
- Materials, Manufacturing and Industrial Engineering
  - Engineering Materials
  - Casting, Forming and Joining Processes
  - Machining and Machine Tool Operations

- Metrology and Inspection
- Computer Integrated Manufacturing
- Production Planning and Control
- Inventory Control
- Operations Research

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

**VIDYUT SAHAYAK – JUNIOR ENGINEER (INSTRUMENTATION & CONTROL)**

**Section : I General Knowledge (10%)**

**Section : II English Knowledge (10%)**

**Section : III Instrumentation & Control Engineering covering following topics (60%)**

- Engineering Mathematics
- Instrumentation Engineering
  - Electrical Circuits
- Signals and Systems
- Control Systems
- Analog Electronics
- Digital Electronics
- Measurements
- Sensors and Industrial Instrumentation
- Communication and Optical Instrumentation

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

**VIDYUT SAHAYAK – JUNIOR ENGINEER (ELECTRONICS & COMMUNICATION)**

**Section : I General Knowledge (10%)**

**Section : II English Knowledge (10%)**

**Section : III Electronics & Communication Engineering covering following topics (60%)**

- **Networks**
  - Network graphs & Network theorems
  - Steady state sinusoidal analysis
  - Linear constant coefficient differential equations
- **Electronic Devices**
  - Energy bands in silicon, intrinsic and extrinsic silicon.
  - Zener diode, tunnel diode, BJT, JFET, MOS capacitor, MOSFET, LED, P-L-N and avalanche photo diode,
  - Device technology
- **Analog Circuits**
  - Small Signal Equivalent circuits of diodes,
  - Amplifiers & Simple op-amp circuits. Filters.
- **Digital Circuits**
  - Boolean algebra,
  - Combinatorial & Sequential circuits:
  - Microprocessor (8085) architecture, programming, memory and I/O interfacing.
- **Signals & Systems**
  - Definitions and properties of Laplace transform,
  - Sampling theorem. Linear Time-Invariant (LTI) Systems
  - Signal transmission through LTI systems.
- **Control Systems**
  - Basic control system components
  - Open loop and closed loop (feedback) systems and stability analysis
  - Control system compensators
- **Communications**
  - Analog communication systems & spectral analysis
  - signal-to-noise ratio (SNR) calculations for amplitude modulation
  - Fundamentals of information theory and channel capacity theorem
  - Basics of TDMA, FDMA and CDMA and GSM.
- **Electromagnetics**
  - Elements of vector calculus, Wave equation,
  - Transmission lines: characteristic impedance; impedance transformation;

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

## **VIDYUT SAHAYAK – JUNIOR ENGINEER (METALLURGY)**

**Section : I General Knowledge (10%)**

**Section : II English Knowledge (10%)**

**Section : III Metallurgy Engineering covering following topics (60%)**

- Engineering Mathematics
- Thermodynamics and Rate Processes
- Extractive Metallurgy
- Physical Metallurgy
- Mechanical Metallurgy
- Manufacturing Processes

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

## **VIDYUT SAHAYAK – JUNIOR ENGINEER (CIVIL)**

**Section : I General Knowledge (10%)**

**Section : II English Knowledge (10%)**

**Section : III Civil Engineering covering following topics (60%)**

- Engineering Mathematics
- Structural Engineering
  - Construction Materials & Management
  - Concrete Structures
  - Steel Structure
- Soil Mechanics & Foundation Engineering
- Water Supply and Sanitation
- Water & waste water
- Rain Water Harvesting
- Water Proofing
- Sewage Treatment Plants and Treated Sewage Water
- Municipal Solid Waste Management
- Road / Railways

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

**VIDYUT SAHAYAK – JUNIOR ENGINEER (ENVIRONMENT)**

**Section: I General Knowledge (10%)**

**Section: II English Knowledge (10%)**

**Section: III Environment Engineering covering following topics (60%)**

- Environmental Engineering Chemistry
- Elements of Chemical Engineering & Chemical Engineering Processes
- Fluid Mechanics
- Environmental Science – Basic
- Environmental Sciences - Advanced
- Basics of Structural Engineering
- Environmental Microbiology
- Ecology and Remote Sensing
- Water Pollution & Control
- Advanced Environmental Instrumentation
- Physical & Chemical Treatment
- Environmental Resources
- Air Pollution Control and Management
- Biological Process for Wastewater Treatment
- Occupational Health & Safety
- Advanced Wastewater Treatment Technologies
- Industrial Water Pollution & Control
- Cleaner Production and Waste Utilization
- Environmental Monitoring and Data Management
- Environmental Impact Assessment
- Treatment Process Design and Drawing
- Environmental Legislation and Audit
- Ground Water Contamination
- Hazardous waste management
- Development of environmental mitigation measures
- Development of environmental management and plans

**Section-IV : Computer Knowledge (10%)**

**Section-V : Gujarati Language & Grammar (10%)**

**“The question paper will be in English Language only”**

2.	The question paper for the exam shall be consisting of 100 questions and the paper shall be of 100 marks. There shall be negative marking system and 1/4th mark for each wrong answer shall be deducted to arrive at total marks scored.
3.	If applications are received in large number then examination will be held in multiple batches/sessions and candidates' scores shall be normalized as per Normalization formula attached herewith.
4.	The Management reserves the right to short-list, select and reject any candidates for exam as the case may be for selection.
<b>C.</b>	<b>Result of Exam</b>
1.	As per GSO-3 the minimum eligibility cut off marks for selection will be 50 and above marks for unreserved & EWS and 45 and above marks for reserved candidates. If exam is held in multi-session, marks shall be considered after normalization. The selection will be made purely on the basis of merit considering available vacancies and reservation rules.
2.	5% marks (of secured marks in Exam) over and above actual marks secured shall be added in case of Widow Female Candidates. The widow female candidate, if remarried shall not be given advantage of grace of 5 % marks. Further, the widow candidates shall categorically state so and inform if they are remarried with necessary documentary proofs.
3.	While preparing selection list, if two or more candidates found with equal marks in Exam, they will be kept in merit according to their date of birth i.e. elder will be kept in priority to younger and if the date of birth is also found same, then they will be kept in priority according to alphabet seniority of name.
4.	The Selection List as and when required as per the vacancy position shall be drawn from result published. The result published shall be valid for the period of one year from the date of publication.
5.	The selection for the above posts will be on the basis of marks obtained in Exam and subject to reservation rules, documents verification and pre-employment medical examination.
6.	The Management reserves the right to cancel the Selection List at any time at its sole discretion, without assigning any reasons thereof.
<b>D.</b>	<b>Other Conditions</b>
1.	The vacancies shall arise throughout the year and the appointment is subject to requirement as per roster point applicable from time to time during the year.
2.	The candidates shortlisted for Exam on the basis of their "On-line Applications" shall be required to submit photocopies of all the relevant certificates and subsequently, the original certificates for verification as and when required and if not submitted within prescribed time limit; their candidature will be considered invalid.
3.	The candidates who have been given grades in their result (Graduation) shall have to submit a certificate issued by their University/Institute specifying percentage equivalent to the grades obtained by them along with decimals.
4.	The candidates working in Government / Semi Government or PSU Organization shall have to produce "NO OBJECTION CERTIFICATE" from the concerned organization at the time of documents verification, failing which, their candidature will be rejected.