

**Department of Electronics & Communication Engineering**

**Technician**

**Stage-I (Screening Test)**

**Stage-I (Screening Test):** A screening test shall be conducted in the first phase in form of multiple choice written test. Written test shall be of **90 minutes'** duration comprising of **75 questions**. Each **correct answer will be awarded One [1] mark** and for each **wrong answer One-fourth [1/4] mark shall be deducted**. Screening test shall consist of questions on **General English**(Tenses, Active and Passive, Direct and Indirect speech, Punctuation, Correction of sentences, One word substitutes, Modals, Articles, Clauses, Synonyms, Antonyms, Idioms and Phrases); **Numerical Aptitude Arithmetic**(Simplification of Fractions, Simple and Compound Interest, Profit and Loss, Percentage, Averages, Number System, Time and Work, Problems on Trains, Calendar, Area, Problems on Numbers, Square root, Cube root, Time and Distance and Other basic Arithmetic related matters);**Reasoning and Data Interpretation** (Number Series Compilation, Missing Number finding, Pattern series, Direction Sense Test, Series Compilations, Classification, Missing Character finding, odd man out, Blood relations, Analogy, Coding and Decoding, Letter and Symbol Series, Verbal reasoning, Statement and Conclusions, Letter and Symbol Series, Logical Problems, Arithmetic reasoning, Logical Sequence of words, Pie Chart and Bar Chart).

Eligible candidates **Ten Times** of the positions in each category will be screened for the Stage-II subject to the fulfillment of all educational qualification etc. as per the Recruitment Rules-2019.

**Stage-II (Skill test)**

**Stage-II (Skill Test):** The skill test will be of qualifying nature.

**Laboratory Experiments** etc. as per nature of the post shall be conducted in the respective laboratories/field. Minimum qualifying marks in the skill test will be [UR:30%; EWS:27%; OBC:27%; SC;20%; ST:20%; PwD:15%].

The candidates, who will qualify the skill test, will be called for the final written test. The Candidates appearing in the written test must ensure their eligibility for the particular category of post. The documents in support of their eligibility shall be verified before the Final test. If

any candidate will not have requisite qualification etc. as per the post for which he is appearing will not be allowed to sit in the final test (Stage-III).

### **Stage-III (Final test)**

**Stage-III (Final Test):** Final written test shall be of 2 hours duration comprising of 100 multiple choice questions.

Each **correct answer will be awarded One [1] mark** and for each **wrong answer One-fourth [1/4] mark shall be deducted**. Only those who are screened in after the Screening test [Stage –I] and qualify the Skill Test [Stage-II] will be allowed to appear in the Final Test [Stage III]. The minimum passing marks in Final test will be [UR:30%; EWS:27%; OBC:27%; SC;20%; ST:20%; PwD:15%].

**The final merit list shall be drawn on the basis of the stage-III written test.**

**SYLLABUS FOR SKILL TEST AND FINAL WRITTEN TEST IS AS PER ANNEXURE-IV.**

**Department of Electronics & Communication Engineering**

**Syllabus for Skilltest (Technician)**

- Basic Electronics etc
- Analog and Digital Electronics.
- Basic Electrical Engineering Concepts.
- Communication Concepts
- AC Fundamentals.
- Measurement and measuring instruments.
- Magnetic Circuit.
- Basic Computer knowledge
- IT Literacy

## Department of Electronics & Communication Engineering

### Syllabus for Final written test (Technician)

**1. Aptitude-** Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Interest, Percentage, Ratio, Time and Distance, Problems on Ages, Clock, Simplifications, Odd Man Out Series

**2. Reasoning-** Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding and Decoding, Syllogisms, Letter and Symbol Series, Verbal Reasoning, Statement and Conclusions, Letter and Symbol Series, Logical Problems, Arithmetic Reasoning, Logical Sequence of Words.

**3. General English-** Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Sentence Improvement, One Word Substitutes, Selecting Words, Sentence Corrections, Idioms and Phrases, Common Error Detection, Ordering of Words, Change of Speech, Verbal Analogies, Sentence Formation, Completing Statements.

**4. GK-** Indian History, Indian Economy, Indian Culture, Sports, Books and Authors, Famous Personalities, World Geography, Days and Years, Environmental Science, General Science, Inventions, Basic General Knowledge, Awards and Honors, Famous Places In India, World Organization, Current Affairs.

**5. Computer Fundamentals-** Operating System, MS Word, MS Excel, Power Point

**6. Basic Engineering** – Refer Annexure – II

#### ANNEXURE-II

Basic Science and Engineering - Syllabus Units and Measurement • Definition • Classifications: Fundamental and Derived units • Systems of units: FPS, CGS, MKS • Units of physical quantities, symbols • Conversion factors • Measurement of mechanical quantities, electrical quantities • Related problems

Mass Weight and Density • Definition • Comparison between mass and weight • Comparison between density and relative density/specific gravity • Volume of different geometries (Cube, Cylinder, Cone, Sphere etc.) • Related problems

Work Power and Energy • Definition • Work and its Units, Measurement of work • Work done on bodies moving on horizontal and inclined planes (consider frictional forces also) Concept of Power and its units, Calculations of power (simple cases) • Concept of Kinetic energy and potential energy, Expressions for P.E and K.E • Principle of conservation of energy • Related problems

Speed and Velocity • Definition of speed, velocity and their comparison • Scalar and Vector quantity • Average Velocity, Acceleration & Retardation • Equations of motion • Circular Motion: Relation between circular motion and Linear motion • Related problems

Heat and Temperature • Definition • Specific Heat and Thermal Capacity • Types of heat: Sensible Heat, Latent Heat • Difference between heat and temperature • Different temperature scales and conversions • Temperature measuring instruments

Basic Electricity • Source of electricity: Battery, Generator, Thermocouple • Types of electric current: Direct current, Alternate current • Difference between AC and DC • Electrical Terms and units • Ohm's Law, Kirchhoff's law Relationships between Current, Volt, Resistance and Power • Resistance connections, Simple Problems on series and parallel circuits • Insulators: Properties and Classification • Conductors: Properties and Classification • Electric Power, Work and energy

Occupational Safety, Health • Safety & Health: Introduction and Importance of Occupational Safety and Health • Occupational Hazards: Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention • Accident & safety: Basic principles for protective equipment, Accident Prevention techniques – control of accidents and safety measures • First Aid: Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person • Basic Provisions: Idea of basic provision of safety, health, welfare under legislation of India

Environment Education • Ecosystem: Introduction to Environment, Relationship between Society and Environment, Ecosystem and Factors causing imbalance • Pollution: Pollution and pollutants including liquid, gaseous, solid and hazardous waste • Energy Conservation: Conservation of Energy, re-use and recycle • Global warming: Global warming, climate change and Ozone layer depletion • Ground Water: Hydrological cycle, ground and surface water, Conservation and Harvesting of water • Environment: Right attitude towards environment, Maintenance of in-house environment.

I.T. Literacy • Computer: Introduction, Computer and its applications, Hardware and peripherals, switching on and shutting down of computer • WINDOWS: Basics of Operating System, WINDOWS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc. • MS office: Basic operations of Word Processing (Cut /Copy /Paste/ Formatting), Basics of Excel worksheet (Commands/simple formulas and functions) • INTERNET: Computer Networks (LAN/WAN), Applications of Internet (Browsing, Searching, Emailing, Social Networking) • WEB Browser: World Wide Web (WWW), Web Browsing, Information Security and antivirus tools, Awareness of IT – ACT, Importance of information security and IT act, types of cybercrimes.