

**SYLLABUS FOR THE WRITTEN TEST — Phase I**

**Name of the Post: Technical Assistant Grade I (Junior Engineer - Civil)**

There will be 5 sections in the written test with 100 questions that account for a total of 100 marks. The subject-wise details are given below:

Section	Subject	No. of Questions	Max Marks	Exam Duration
1	General Intelligence	20	20	90 minutes
2	General Awareness	20	20	
3	Quantitative Aptitude (Basic Arithmetic Skill)	20	20	
4	English Language (Basic Knowledge)	20	20	
5	Computer Proficiency	20	20	
<b>Total</b>		<b>100</b>	<b>100</b>	

**1. GENERAL INTELLIGENCE:**

The questions are of both verbal and non-verbal types. The questions will be 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, Other sub-topics, if any Numerical operations.

**2. GENERAL AWARENESS:**

Questions are designed to test the candidate's general awareness of the environment around and its application to society. Questions are also designed about the 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.**

**3. QUANTITATIVE APTITUDE:**

**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 Allegation, Time and distance, Time and work.

**Algebra:** Basic algebraic identities of School Algebra 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.

**Mensuration:** Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Regular Right Pyramid with triangular or square Base.

**Trigonometry:** Trigonometry, Trigonometric ratios, Complementary angles, Height and distances (simple problems only)

**Statistical Charts:** Use of Tables and Graphs: Histogram, Frequency polygon, Bar-diagram, Pie-chart.

#### **4. ENGLISH LANGUAGE:**

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.

#### **5. 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 and 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.

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DIRECTOR**