Vizag Steel Management Trainee Exam Pattern

Sr. No.	Name of Test	Number of Questions	Maximum Marks	Duration
1.	Reasoning (25 Verbal & 5 Non-Verbal)	30	30	25 Minutes
2.	English Language	20	20	20 Minutes
3.	General Awareness	20	20	10 Minutes
4.	Quantitative Aptitude/Data Interpretation	30	30	25 Minutes
5.	Discipline	100	100	60 Minutes
	Total	**200**	**200**	140 Minutes

Vizag Steel Management Trainee Syllabus - Topic Wise

I) Non-Technical Subject Syllabus

Data Interpretation

- Case lets
- Venn Diagrams
- Line Charts
- Column Graphs
- Bar Graphs
- Tables
- Pie Chart

Aptitude

- Ratio & Proportion
- Square roots
- Averages
- Interest
- Whole numbers
- Decimals
- Time & Work
- Basic algebraic identities of School Algebra
- Graphs of Linear Equations
- Fractions and relationships between numbers
- Percentage
- Profit and Loss
- Discount
- Partnership Business
- Mixture and Allegation
- Quadrilaterals

- Heights and Distances
- Histogram
- Time and distance
- Triangle and its various kinds of centers
- Congruence and similarity of triangles
- Circle and its chords
- Tangents
- Angles subtended by chords of a circle
- Common tangents to two or more circles
- Triangle

Verbal and Non-Verbal Reasoning

- Similarities and differences
- Judgment
- spatial orientation
- space visualization
- statement conclusion
- syllogistic reasoning
- problem-solving
- Analogies
- decision making
- Visual memory
- Semantic Analogy
- Symbolic/Number Analogy
- Figural Analogy
- non- verbal series
- coding and decoding
- relationship concepts
- analysis
- Discrimination
- Observation
- Symbolic/Number Classification
- Coding & de-coding
- Numerical Operations
- symbolic Operations
- Social Intelligence
- Figural Series
- Problem Solving
- Space Visualization
- Venn Diagrams
- Trends
- Semantic Classification
- Critical thinking
- Date & city matching
- Classification of Centre codes/roll numbers

- Small & Capital letters/numbers coding
- decoding and classification
- Arithmetical reasoning and figural classification
- Arithmetic number series
- Word Building
- Drawing inferences
- Space Orientation
- Embedded Figures
- Punched hole/pattern–folding & un-folding
- Figural Pattern– folding and completion
- Indexing, Address matching
- Emotional Intelligence
- Figural Classification
- Semantic Series
- Number Series

General English

- Substitution
- Theme Detection
- Active and Passive Voice
- Topic rearrangement of passage
- Error Correction (Phrase in Bold)
- Fill in the blanks
- Para Completion
- Idioms and Phrases
- Data Interpretation
- Spelling Test
- Sentence Completion
- Antonyms
- Homonyms
- Sentence Arrangement
- Spelling Test
- Joining Sentences
- Passage Completion
- prepositions
- Word Formation
- Direct and Indirect speech
- Sentence Improvement
- Spotting Errors
- Sentence Arrangement.
- Error Correction (Underlined Part)
- Transformation
- synonyms

General Awareness

- Indian Economy
- Indian Parliament
- Science & Technology
- Inventions in the World
- Geography
- Current Affairs
- Chemistry
- Indian Polity & Governance
- Culture
- Books and Authors
- Indian History
- Botany
- Current Affairs – National & International
- Indian Constitution
- Famous Days & Dates
- General Knowledge
- History
- Famous Books & Authors
- Geography
- Current events
- Indian Politics
- Everyday Science
- Indian Culture
- Sports
- Zoology
- Environment
- Abbreviations
- Economic Scene
- Indian Culture
- Space & IT
- Indian Constitution
- Sports and Games
- Science – Inventions & Discoveries
- Important Days
- General Politics
- Basic Computer
- Physics
- Scientific observations
- International issues
- Social Science
- National News (current)
- General Science
- Economy
- Political Science
- Indian National Movement
- About India

- History – India & World
- Cultural Heritage
- Awards and Honors
- Important Financial & Economic News

II) Technical Subjects Syllabus

Metallurgy Engineering:

- Metallurgical Thermodynamics and Kinetics
- Transport Phenomena
- Physical Metallurgy and Materials Engineering
- Ferrous Production Technology
- Mechanical Behavior of Materials
- X-ray Diffraction and Electron Microscopy
- Mechanical Working of Materials
- Non-Ferrous Extractive Metallurgy
- Powder Metallurgy
- Foundry Technology and Non-Destructive Testing
- Electro Metallurgy and Corrosion
- Mineral processing
- Phase Transformations and Heat Treatment
- Unit Processes in Extractive Metallurgy
- Characterization Techniques

Mining Engineering Subject/Topic:

- Surveying I
- Drawing/Practical's
- Engineering Graphics
- English Communication
- Applied Mathematics I
- Mining Geology Lab I
- Mining Practice I
- Basic Computer Skills
- Applied Science
- Surveying Practice I
- Mine Surveying Practice
- Computer Application in Mining Lab
- Mineral Recovery
- Project Work
- Mine Legislation & General Safety
- Rock Mechanics & Ground Control
- Basic Management Skills & Indian Constitution
- Project Work
- Blasting Techniques in Mines

- Mine Environmental Engineering Lab
- Basics of Electrical & Electronics Engg. (Mining)
- Mining Geology I
- Introduction to Mining
- U/G Metalliferous Mining
- Mine Machinery
- Mine Machinery Lab
- CASP
- Surface Mining
- Mechanical Technology (Mining)
- Industrial Training in Underground Mines (Module I)
- Mine Environmental Engg.

Civil Engineering:

- Concrete/ Construction Technology
- Structural Engineering/RCC design
- Environmental Engineering
- Engineering Mechanics
- Survey estimating
- Civil Engineering Materials
- Fluid Mechanics
- The Strength of Materials
- Soil Mechanics
- Transportation Engineering
- Structural Engineering/Steel/ Reinforced Cement Concrete

Electrical Engineering:

- Electrical Measurements & Measuring
- Electrical Basics
- Power Systems
- Analog Circuits/ Electronics
- Network theory
- Digital Electronics
- Control System
- Power Electronics & Drives
- Instruments
- Circuit Theory
- Electrical Engineering Materials
- Machines
- Microprocessor

Mechanical Engineering:

- Design of Machine Elements

- Engineering Materials
- Engineering Mechanics
- Mechanism and Machines
- Fluid Mechanics
- Heat Transfer
- Mechanics of Solids
- Manufacturing
- Industrial Engineering
- Mechatronics and Robotics
- Thermodynamics
- Energy conversion
- Environmental control

Electronics Engineering:

- Control Systems and instrumentation
- Electronic Communication
- Electromagnetic Fields and antennas
- Communication Systems
- Signals and Systems
- Digital Signal and Image Processing
- Semiconductor Theory and Electronic Devices
- Circuit Theory
- VLSI and Embedded Systems
- Computer Engineering
- Analog electronic circuits

Ceramic Engineering:

- Grinders and Mixers.
- Determination of plasticity of ceramic body mixes.
- Operation and control of furnaces & instruments.
- Melting of simple glasses.
- To determine the time of grinding in a ball mill for producing a product with 80% passing a given screen.
- Pressing and fabrication of ceramic powders
- Drying, calcination & sintering.
- Determination of cold crushing strength of refractory.
- Preparation of ceramic specimens for observation of microstructure by optical microscope.
- Classification, components, and operation of laboratory furnaces.
- Characterization of ceramic powders. Making of ceramic body mixes.
- Introduction to ceramic processing.
- Synthesis of ceramic powder.
- Firing of ceramic bodies and determination of shrinkage.

Chemical Engineering:

- Chemical Engineering Thermodynamics
- Fluid Flow Operation
- Alternative Energy Resources
- Petroleum Production Technology
- Transport Phenomena
- Energy Engg
- Process Dynamics and Control
- Heat Transfer Operation
- Environmental Pollution Control Engineering
- Process Calculation
- Mass Transfer Operation
- Petroleum Refining and Petrochemical
- Mechanical Operations
- Chemical Reaction Engg
- Fundamental of Chemical Engg
- Advanced Separation Techniques
- Process Instrumentation
- Process Equipment Design