

1. Executive (Finance) – 120 MCQs

a. Subject Knowledge Test (SKT) – 80 MCQs

- i. **Financial Accounting:** Accounting Standards, Corporate Accounts, Indirect & Direct - Tax Management, Auditing, Corporate & Industrial Laws, etc.
- ii. **Cost & Management Accounting:** Costing Techniques, Cost Audit, Project Planning, Financing, Analysis and Management, Quantitative Techniques, Operation & Project Management Control, etc.
- iii. **Financial Management:** Management Science, International Financial Management, Risk Management, Capital Market Analysis, Financial Derivatives, Security Analysis and Investment Management, etc.
- iv. **General:** Managerial Economics, Management Information Systems, Computer Applications in Business, Management Control System, etc.

b. Executive Aptitude Test – 40 MCQs

- i. **Numerical Ability:** Arithmetic (BODMAS, Averages, Ratio, Proportion, Percentages, Profit-Loss-Discount, Simple & Compound interest, Time-Speed-Distance, Time & work), Mensuration & Geometry, Linear Equations, Series & Progression, Set Theory, Permutation & Combination, Logarithm, Trigonometry, etc.
- ii. **Reading Comprehension (English Language):** Questions based on Passages, Cloze tests, Sentence Correction, Para Jumbles, Fill in the blanks (Conjunctions, Prepositions, Articles), Vocabulary based questions (Synonyms, Antonyms, Idioms), etc.
- iii. **Reasoning:** Number Series, Coding-Decoding, Odd Man Out, Direction Tests, Seating Arrangements (Linear & Circular), Blood Relations, Syllogisms, Venn Diagrams, etc.
- iv. **General Awareness:** Current Affairs (National & International), General Knowledge, Who's who, Sports, etc.
- v. **Data Interpretation:** Number series, Tabular Data/Graph, Bar Charts, Pie charts, Histograms, Frequency Polygons. Measures of Central Tendency (Mean, Median, Mode), etc.

2. Executive (Environment Management) – 120 MCQs

a. Subject Knowledge Test (SKT) – 80 MCQs

- i. **Fundamentals of Environmental Science:** Principles, Scope, Structure of the Atmosphere, Hydrosphere, Lithosphere, and Biosphere; Laws of Thermodynamics, Heat, Mass, Energy transfer, etc.
- ii. **Environmental Chemistry:** Covalent and Ionic Bonding, Chemical Equilibria, Thermodynamics, kinetics, and the chemistry of organic molecules and radioactivity.
- iii. **Water & Soil Chemistry:** Water & Effluent Quality Parameters, Acid-base Equilibria, Carbonate Systems, Solubility of Gases, Complexation, Precipitation, Redox Reactions, and Soil Constituents like Organic Matter and CEC, etc.
- iv. **Atmospheric Chemistry:** Composition, Reactivity of Trace Substances, Smog, Ozone Formation, Stratospheric Chemistry, etc.
- v. **Air Pollution Fundamentals:** Measurement, Control Methods for Particulate & Gaseous Pollutants (e.g., ESPs, Cyclones, Scrubbers, Adsorption), Impact assessment methods, etc.
- vi. **Water & Wastewater Treatment:** Principles, Design Technologies & Types of Treatments, Processes for Water, Wastewater & Sewage Effluents, Water Conservation Methods, etc.
- vii. **Solid & Hazardous Waste Management:** Principles & Management Techniques for solid, E-waste, Bio-Medical, C&D Waste, Plastic Waste, Hazardous Wastes, etc.
- viii. **Environmental Regulations & Standards:** Understanding Relevant Indian & International Environmental Laws & Policy and ISO Standards, Particularly ISO 14001, etc.
- ix. **Environment Management Systems:** Understanding the Environmental Impact Assessment & Environment Management Plan, Wildlife Management Plan, Microbiology, Ecology. Environmental Planning, Environmental Change & Sustainable Development, Understanding of NPV, CAMPA, Forest & Environmental Clearances, etc.

b. Executive Aptitude Test – 40 MCQs

- i. **Numerical Ability:** Arithmetic (BODMAS, Averages, Ratio, Proportion, Percentages, Profit-Loss-Discount, Simple & Compound interest, Time-Speed-Distance, Time & work), Mensuration & Geometry, Linear Equations, Series & Progression, Set Theory, Permutation & Combination, Logarithm, Trigonometry, etc.
- ii. **Reading Comprehension (English Language):** Questions based on Passages, Cloze tests, Sentence Correction, Para Jumbles, Fill in the blanks (Conjunctions, Prepositions, Articles), Vocabulary based questions (Synonyms, Antonyms, Idioms), etc.
- iii. **Reasoning:** Number Series, Coding-Decoding, Odd Man Out, Direction Tests, Seating Arrangements (Linear & Circular), Blood Relations, Syllogisms, Venn Diagrams, etc.
- iv. **General Awareness:** Current Affairs (National & International), General Knowledge, Who's who, Sports, etc.
- v. **Data Interpretation:** Number series, Tabular Data/Graph, Bar Charts, Pie charts, Histograms, Frequency Polygons. Measures of Central Tendency (Mean, Median, Mode), etc.

3. Assistant Mine Surveyor – 120 MCQs

a. Subject Knowledge Test (SKT) – 80 MCQs

- i. Linear & Angular Measurements
- ii. Area & Volume calculations
- iii. Theodolite Traversing
- iv. Levelling
- v. Trigonometry & Rectangular Co-ordinate Calculations
- vi. True North Determination
- vii. Triangulation
- viii. Topographic Survey & Tacheometry Survey
- ix. Survey Adjustments & Theory of Errors
- x. Contouring
- xi. Underground Mine Surveys & Opencast Mine Surveys
- xii. Correlation of underground & Surface Surveys
- xiii. Subsidence Survey
- xiv. Surveys for Construction and Development Purpose - Responsibilities of the Survey Department at the Mine Construction Phase, Setting out Geometrical Elements, Setting out Direction of Workings, Setting out Rail Curves on Surface & Underground, Surveys during Drivage by Approaching Headings
- xv. Dip, Strike & Fault Problems
- xvi. Coal Heap Measurement & Overburden Measurement
- xvii. Duties & Responsibilities of a Surveyor as per Coal Mines Regulations 2017
- xxviii. Plans - Types of Plans Statutorily required as per Coal Mines Regulations 2017, Accuracy in Underground & Surface Surveying as per the Statute, Plan Accuracy, Knowledge of various provisions under Coal Mines Regulations 2017
- xix. Circulars of DGMS regarding Mine Surveying
- xx. Total Station, DGPS, 3DTLS & Drone surveying in Opencast Mines
- xxi. Application of Computers & Software in Mine Surveying (SURPAC, LISCAD, etc.)
- xxii. Elementary Knowledge in Remote Sensing & GIS, Geomatics
- xxiii. National grid - Global coordinates, World Geodetic System (WGS), Application of Google Earth & Universal Transverse Mercator, Transformation of Coordinates, Vertical Projections, Mine Models
- xxiv. Area & Volume Calculation, Different Methods & their Limitations, Earth Work & Building Estimation
- xxv. Subsidence Survey, Slope monitoring, Profiling of benches, highwall, dumps, slopes
- xxvi. Bathymetric survey, etc.

b. Executive Aptitude Test – 40 MCQs

- i. **Numerical Ability:** Arithmetic (BODMAS, Averages, Ratio, Proportion, Percentages, Profit-Loss-Discount, Simple & Compound interest, Time-Speed-Distance, Time & work), Mensuration & Geometry, Linear Equations, Series & Progression, Set Theory, Permutation & Combination, Logarithm, Trigonometry, etc.
- ii. **Reading Comprehension (English Language):** Questions based on Passages, Cloze tests, Sentence Correction, Para Jumbles, Fill in the blanks (Conjunctions, Prepositions, Articles), Vocabulary based questions (Synonyms, Antonyms, Idioms), etc.
- iii. **Reasoning:** Number Series, Coding-Decoding, Odd Man Out, Direction Tests, Seating Arrangements (Linear & Circular), Blood Relations, Syllogisms, Venn Diagrams, etc.
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