#### **RCFL MT Exam Pattern**

S. no	Test Type	<b>Concept Names</b>	No Of Marks	No Of Questions	Time Duration
1		Technical Subjects	50 Marks	50 Questions	
2	Objective Type Questions	General English, Quantitative Aptitude, Reasoning & General Knowledge / Awareness	50 Marks	50 Questions	90 Minutes

# **RCFL Management Trainee Syllabus - Topic Wise**

# **Chemical Engineering Topics:**

- Applied Chemistry
- Basic Chemical Engineering
- Chemical Engineering Thermodynamics
- Chemical Process Calculations
- Engineering Material
- Environmental Engineering
- Fluid Flow
- Heat Transfer
- Industrial Management
- Industrial Stoichiometry
- Instrumentation and Process Control
- Mass Transfer I
- Mass Transfer II
- Mechanical Operations
- Momentum Transfer
- Inorganic Chemistry
- Professional Ethics and Indian Constitution.

## **Instrumentation Engineering:**

- Analog Electronics
- Engineering Mathematics
- Principles of Instrumentation Engineering
- Principles of Automatic Control
- Transducers
- Transducers and Signal Conditioning Circuits
- Industrial Electronics
- Process Control & Instrumentation
- Electrical Circuits

- Measurements
- Sensors and Industrial Instrumentation
- Signals and Systems
- Control Systems
- Communication and Optical Instrumentation
- Digital Electronics.

#### **Mechanical:**

- Metal Casting
- Production Planning and Control
- Computer Integrated Manufacturing Design
- Inventory Control
- Fluid Machines
- Industry Safety
- Inventory Control
- Machining and Machine Tool Operations
- The Strength of Materials
- Management Information System
- Machining and Machine Tool Operations
- Thermodynamics
- Meteorology and Inspection
- Product Design and Development
- Heat Transfer
- Fluid Mechanics
- Theory of Machines
- Operations Research
- Machine Design
- Engineering Mechanics
- Energy conservation
- Engineering Materials.

#### **Electrical:**

- Estimation and Costing
- Basic concepts
- Synchronous Machines
- Fractional Kilowatt Motors
- Single-phase Induction Motors
- Transmission and Distribution
- Utilization and Electrical Energy
- Generation
- Circuit law
- Measurement and Measuring Instruments
- Electrical Machines
- Magnetic Circuit

- AC Fundamentals
- Electric Circuits
- Electrical Machines
- Power Systems
- Utilization & Control Systems
- Analog and Digital Electronics
- Power Electronics and Drives.

## **Quantitative Aptitude:**

- Permutation and Combination.
- Simple Interest.
- Decimal Fraction.
- Area.
- Volume and Surface Area.
- Pipes and Cistern.
- Simplification.
- Numbers.
- Problems on Ages.
- Boats and Streams.
- Partnership.
- Compound Interest.
- Square Root and Cube Root.
- Problems on H.C.F and L.C.M.
- Stocks and Share.
- Logarithm.
- Races and Games.
- Time and Distance.
- Allegation or Mixture.
- Time and Work.
- Probability.
- Banker's Discount.
- Average.
- Height and Distance.
- Chain Rule.
- Surds and Indices.
- Ratio and Proportion.

# **Reasoning:**

- Number Series.
- Data Interpretation.
- Non-Verbal Series.
- Analogy.
- Number Ranking.
- Directions.

- Statements & Arguments.
- Cubes and Dice.
- Decision Making.
- Statements & Conclusions.
- Coding-Decoding.
- Arithmetical Reasoning.
- Syllogism.
- Mirror Images.
- Embedded Figures.
- Alphabet Series.
- Clocks & Calendars.
- Blood Relations.

#### **General Awareness:**

- National Dance
- Music & Literature
- Indian Culture
- Scientific observations
- Political Science
- Books and Authors
- Important Dates
- About India and it's neighboring countries
- Science and innovations
- New inventions
- Economic problems in India
- Geography of India
- National and International current affairs
- World organizations
- Countries and Capitals
- Famous Places in India.

## **English:**

- Sentence Arrangement.
- Error Correction (Underlined Part).
- Idioms and Phrases.
- Prepositions.
- Active Voice and Passive Voice.
- Joining Sentences.
- Antonyms.
- Spotting Errors.
- Error Correction (Phrase in Bold).
- Passage Completion.
- Sentence Completion.
- Synonyms.

- Sentence Improvement. Para Completion. Substitution.

- Fill in the blanks.

