### General Knowledge - mrpl.co.in Apprentice Syllabus

- Indian National Movement
- Sports
- Current Affairs National and International
- Abbreviations
- General Policy
- Science and Technology
- Science Inventions & Discoveries
- Indian Economy
- Budget and Five Year Plans
- Countries and Capitals
- Important Days
- Indian History
- Books and Authors
- Awards and Honors
- Capitals of India
- International and National Organizations

### Mangalore Refinery and Petrochemicals Limited - Aptitude Syllabus

- Numbers and Ages
- Boats and Streams
- Simplification and Approximation
- Mixtures and Allegations
- Simple Interest

- Problems on LCM and HCF
- Time and Work Partnership
- Problems on Trains
- Ratio and Proportion
- Areas
- Volumes
- Percentages
- Averages
- Mensuration
- Probability
- Time and Distance
- Quadratic Equations
- Odd Man Out
- Races and Games
- Profit and Loss
- Problems on Numbers
- Pipes and Cisterns
- Indices and Surds
- Simple Equations
- Permutations and Combinations
- Compound Interest

#### MRPL Technician Apprentice - General English Syllabus

- Antonyms
- Vocabulary

- Comprehension
- Tenses
- Transformation of Sentences
- Synonyms
- Idioms & Phrases
- Active & Passive Voice
- Direct & Indirect Speech
- Fill in the Blanks
- One Word Substitution

### **Chemical Engineering - MRPL Graduate Apprentice Syllabus**

- Fluid Mechanics and Mechanical Operations
- Heat Transfer
- Thermodynamics
- Mass Transfer 1
- Mass Transfer 2
- Mechanical Operations
- Instrumentation and Process Control
- Chemical Reaction Engineering
- Process Calculations
- Chemical Technology
- Plant Design and Economics
- Environmental Engineering
- Environmental Science

• Process Dynamics and control

### mrpl.co.in Apprentice Syllabus - Civil Engineering

- Building Planning
- Valuation
- Professional practice
- Transportation Engineer 1 & 2 (Road)
- Quantity Estimation
- Building Code
- Town Planning
- GIS
- Structural Analysis
- Soil Mechanics
- Hydraulic Structure

### **Electrical & Electronic Engineering**

- Measurement of Electrical Power
- Present Power Sector scenario in India and others Electrical
- Power Engineering
- Analysis of Dist Transformers, Meters & Testing
- Non-conventional Energy sources like Wind, Solar, Biomass
- Engineering topics
- Switchgear & protection (MC/LV) & LT Switchgear design and testing
- Distribution HT/LT Line parameters
- Performance of line fault analysis

- Distribution Network Installation & load studies
- Functions of capacitors & reactors
- Low Voltage constraint & resolving

### MRPL Technician Apprentice Syllabus - Electronics & Communication

#### Engineering

- Mathematics
- Information
- Networks and Systems
- Physics: Circuits
- Semiconductor Devices & Optical Systems
- Computers: Microprocessors
- Computing devices
- Analog & Digital
- Signal processing
- Communications
- VLSI and Embedded systems

### MRPL Apprentice Syllabus - Instrumentation Engineering

- Transducers
- Electrical Circuits
- Measurements
- Analog Electronics
- Engineering Mathematics
- Sensors and Industrial Instrumentation

- Signals and Systems
- Control Systems
- Communication and Optical Instrumentation
- Digital Electronics

#### **MRPL** Apprentice Mechanical Engineering Syllabus

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

- Thermodynamics
- Meteorology and Inspection
- Product design and Development