# **MAHAGENCO Technician 3 Exam Pattern**

## Section Subjects Time Duration Marks/Questions

Section I Aptitude Test Two hours	90
Section II Technical Test	100
Total Marks	190

## MAHAGENCO Technician 3 Syllabus - Topic Wise

## **Aptitude**

- Differential Geometry
- Calculus
- Statics
- Differential Equations
- Operations Research & Linear Programming
- Algebra
- Ratio and Proportion
- Averages
- Numbers
- Fundamental arithmetical operations
- Dynamics
- Computation of Whole Numbers
- Percentages
- Statistics
- Basic Mathematics
- Interest
- Number Systems
- Computation of Whole Numbers
- Profit and Loss
- Analytical Geometry
- Real Analysis
- Number Systems
- Menstruation
- Time and Distance
- Ratio and Time
- Discount
- Use of Tables and Graphs
- Fractions
- The relationship between Numbers
- Time and Work
- Decimals
- Fundamental arithmetical operations

## **Technical Subjects**

#### Civil

- PSC Structures.
- Solid Mechanics, Structural Analysis.
- Reinforced Concrete Structures.
- Civil Engineering Materials and Construction.
- Steel Structures.
- Fluid Mechanics.
- Concrete Technology.

#### **Electrical**

- Basic Electronics.
- Analog and Digital Electronics.
- Network Theory.
- Utilization of Electrical Energy.
- Power Electronics & Drives.
- Magnetic Circuit.
- Estimation and costing.
- Measurement and measuring instruments.
- Electrical Machines.
- Power Systems.
- AC Fundamentals.
- Basic Electrical Engineering Concepts.

#### **Electronics**

- Digital Electronics.
- Analytical, Optical Instrumentation.
- Electrical and Electronic Measurements.
- Basics of Circuits and Measurement Systems.
- Control Systems and Process Control.
- Signals, Systems, and Communications.
- Analog Electronics.
- Transducers, Mechanical Measurement and Industrial Instrumentation.

#### Mechanical

- Theory of Machines.
- Heat-Transfer.
- Engineering Mechanics.
- Production, Planning, and Control.
- Machine Design.
- Vibrations.
- Refrigeration and air-conditioning.
- Inventory Control.

- Mechanics of Materials.
- Turbo-machinery.
- Fluid Mechanics.
- Casting, Forming and Joining Processes.
- I.C. Engines.
- Metrology and Inspection.
- Power Engineering.
- Operations Research.
- Machining and Machine Tool Operations.
- Thermodynamics.
- Computer Integrated Manufacturing.
- Engineering Materials.