

Syllabus:

1 General Aptitude and General Awareness

A. General Intelligence & Reasoning

- Analogies, similarities, differences, space visualization,
- Problem solving, analysis, judgement, decision making,
- Visual memory, discrimination, odd man out, observation,
- Relationship concepts, arithmetical reasoning,
- Figure classification, arithmetical number series etc.

B. Quantitative Aptitude

- Number System
- HCF, LCM, Fractions
- Simplification
- Algebra
- Profit, Loss, and Discount
- Time and Distance
- Time and Work
- Averages
- Ratio and Proportion
- Percentages
- Simple Interest, and Compound Interest

C. General Knowledge and awareness

- Indian Polity
- History of India
- Indian National Movement
- Geography of India
- Books and Authors
- Sports Personalities
- Awards, and Honours
- World Leaders and Personalities

- Basic idea of Neighboring Countries
- Current Affairs/ Events
- General Science

2. Civil Engineering

- Building Materials,
- Estimating, Costing and Valuation,
- Surveying,
- Soil Mechanics, Hydraulics,
- Irrigation Engineering,
- Transportation Engineering,
- Environmental Engineering.
- Theory of Structures,
- Concrete Technology, RCC Design, Steel Design.
- Piling Technology
- Boring and CBM
- Bridge and its foundation
- Foundation System
- Dam Construction

3. Electrical Engineering

- Basics of Electrical Engineering
- Basic concepts, Circuit law, Network Theory,
- Magnetic Circuit, AC Fundamentals,
- Electrical Engineering Materials,
- Measurement and Measuring instruments,
- Electrical Machines (DC & AC),
- Fractional Kilowatt Motors and single phase induction Motors,
- Synchronous Machines,
- Transformers
- Switchgears and Breakers

- Generation, Transmission and Distribution system
- Estimation and Costing,
- Utilization and Electrical Energy,
- Basic Electronics & Control System

4. Mechanical Engineering:

- Basics of Mechanics
- Theory of Machine
- Mechanical Measuring Instruments
- Pneumatics and Hydraulics & Fluid Mechanics
- Production Design
- Engineering Drawing and Design
- Design Calculations
- Manufacturing Processes (Drilling, Milling, and Boring)
- Manufacturing Processes, Heat and Surface Treatment
- Heat and Mass Transfer
- Metrology and Measurements
- Tolerance Limits, Fit
- Air conditioning and Refrigeration
- Turbine and Nozzle
- Thermal Engineering
- Power Plant Engineering
- Hydro Power engineering

5. Electronics Engineering

- Basics of Circuits and Measurement Systems
- Analog Electronics
- Digital Electronics
- Basic Electrical Engg.
- Electrical and Electronic Measurements

- Control Systems and Process Control
- Electronic Components & Materials
- Electronic Devices and circuits
- Linear Integrated Circuit
- Microprocessor and Microcontroller
- Electronic Measurements
- Communication Engineering
- Signals and Systems
- Data communication and Network
- Computer Programming

6. IT Engineering

- Basics of Information Technology
- Digital Electronics
- Computer Organization
- Multimedia and Applications
- Object-Oriented Programming,
- Software Engineering,
- Database Management Systems,
- Data and Network Communication
- Data Structure using C++
- DBMS fundamentals
- Basic Java Programming
- Web Technologies and Programming
- Design and Analysis of Algorithms,
- Computer Architecture,
- Computer Networks,
- Operating Systems,
- System Analysis and Design
- Digital Signal Processing,
- Image Processing