

# Union Public Selection Commission

## General Studies and Engineering Aptitude

- Current issues of national and international importance relating to the social, economic and industrial development
- Engineering Aptitude covering Logical reasoning and Analytical ability
- Engineering Mathematics and Numerical Analysis
- General Principles of Design, Drawing, Importance of Safety
- Standards and Quality practices in production, construction, maintenance, and services
- Basics of Energy and Environment: Conservation, environmental pollution, and degradation, Climate Change, Environmental impact assessment
- Basics of Project Management
- Basics of Material Science and Engineering
- Information and Communication Technologies (ICT) based tools and their applications in Engineering such as networking, e-governance, and technology-based education. 10. Ethics and values in the Engineering profession.

## UPSC Engineering Services Exam Preliminary Exam Syllabus

### Civil Engineering

- Building Materials
- Solid Mechanics
- Structural Analysis
- Design of Steel Structures
- Design of Concrete and Masonry structures
- Construction Practice, Planning, and Management

### Mechanical Engineering

- Fluid Mechanics
- Thermodynamics and Heat transfer
- IC Engines, Refrigeration and Air conditioning
- Turbo Machinery
- Power Plant Engineering
- Renewable Sources of Energy

### Electrical Engineering

- Engineering Mathematics
- Electrical Materials
- Electric Circuits and Fields
- Electrical and Electronic Measurements

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- Computer Fundamentals
- Basic Electronics Engineering

## **Electronics and Telecommunication Engineering**

- Basic Electronics Engineering
- Electronic Measurements and Instrumentation
- Basic Electrical Engineering
- Materials Science
- Network Theory
- Analog and Digital Circuits

## **UPSC Engineering Services Exam Mains Syllabus**

### **Civil Engineering**

- The flow of Fluids, Hydraulic Machines, and Hydro Power
- Fluid Mechanics, Open Channel Flow, Pipe Flow
- Hydraulic Machines and Hydropower
- Hydrology and Water Resources Engineering
- Environmental Engineering
- Water Supply Engineering
- Waste Water Engineering
- Solid Waste Management
- Air, Noise pollution, and Ecology
- Geotechnical Engineering and Foundation Engineering
- Surveying and Geology
- Transportation Engineering
- Highways
- Tunneling
- Railways Systems
- Harbors
- Airports

### **Mechanical Engineering**

- Engineering Mechanics
- Engineering Materials
- Mechanisms and Machines
- Design of Machine Elements
- Manufacturing, Industrial and Maintenance Engineering
- Mechatronics and Robotics

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## **Electrical Engineering**

- Analog and Digital Electronics
- Systems and Signal Processing
- Control Systems
- Electrical Machines
- Power Systems
- Power Electronics and Drives

## **Electronics and Telecommunication Engineering**

- Analog and Digital Communication Systems
- Control Systems
- Computer Organization and Architecture
- Electro Magnetics
- Advanced Electronics Topics
- Advanced Communication Topics