

UKPSC_JE

1. Technical Knowledge:

For Electrical Engineering:

- **Electrical Circuits and Network Theorems:**
 - Ohm's Law
 - Kirchhoff's Laws
 - Network Theorems (Thevenin's, Norton's, Superposition)
- **Electrical Machines:**
 - Transformers (Construction, Operation, Testing)
 - AC and DC Motors (Types, Operation, Characteristics)
 - Generators (Principles, Types)
- **Power Systems:**
 - Power Generation (Hydro, Thermal, Nuclear)
 - Transmission and Distribution
 - Power Factor Improvement
 - Protection Systems (Relays, Circuit Breakers)
- **Control Systems:**
 - Feedback Control
 - Transfer Functions
 - Stability Analysis
- **Electrical Measurements and Instrumentation:**
 - Measuring Instruments (Voltmeters,

Ammeters,
Wattmeters)

- Calibration and Testing

- **Power Electronics and Drives:**

- Semiconductor Devices (Diodes, Transistors, Thyristors)
- Converters, Inverters
- Motor Drives

For Mechanical Engineering:

- **Thermodynamics:**

- Laws of Thermodynamics
- Heat Engines
- Refrigeration and Air Conditioning

- **Fluid Mechanics:**

- Fluid Properties
- Fluid Statics and Dynamics
- Flow Through Pipes

- **Strength of Materials:**

- Stress and Strain
- Beam Deflection
- Material Properties

- **Machine Design:**

- Design of Machine Elements (Shafts, Bearings, Gears)

- **Manufacturing Processes:**

- Casting, Welding, Machining
- Material Removal Processes

- **Power Plant Engineering:**

- Steam, Gas, and Hydroelectric Power Plants

For Civil Engineering:

- **Structural Analysis:**
 - Types of Structures
 - Analysis of Beams and Frames
- **Building Materials:**
 - Properties of Materials
 - Testing of Building Materials
- **Construction Techniques:**
 - Construction Methods and Equipment
 - Building Construction
- **Surveying:**
 - Measurement Techniques
 - Levels and Theodolites
- **Soil Mechanics:**
 - Soil Properties
 - Bearing Capacity
- **Hydraulics:**
 - Fluid Flow and Pressure
 - Hydraulic Structures

For Instrumentation Engineering:

- **Measurement Techniques:**
 - Sensors and Transducers
 - Measurement of Electrical and Non-Electrical Quantities
- **Control Systems:**

	<ul style="list-style-type: none"> ○ Automatic Control ○ Process Control • Signal Processing: <ul style="list-style-type: none"> ○ Analog and Digital Signal Processing • Instrumentation Devices: <ul style="list-style-type: none"> ○ Calibration and Testing of Instruments
2. General Awareness:	<ul style="list-style-type: none"> • Current Affairs: National and International Events • Indian History: Ancient, Medieval, and Modern History • Indian Geography: Physical, Political, and Economic Geography • Indian Polity: Constitution, Governance, and Political System • General Science: Basic Principles of Physics, Chemistry, and Biology • Environment and Ecology: Environmental Issues and Awareness
3. General Hindi and English Language:	<ul style="list-style-type: none"> • General Hindi: <ul style="list-style-type: none"> ○ Grammar ○ Vocabulary ○ Comprehension • General English: <ul style="list-style-type: none"> ○ Grammar ○ Vocabulary ○ Sentence Formation ○ Comprehension <p>Preparation Tips:</p> <ol style="list-style-type: none"> 1. Refer to the Official Syllabus: Always check the latest UKPSC notification

for the most accurate and updated syllabus.

2. **Use Standard Textbooks:**

For technical subjects, refer to well-regarded textbooks and study materials specific to your engineering discipline.

3. **Practice Previous Papers:**

Solving previous years' papers will help you understand the exam pattern and question types.

4. **Stay Updated:** Keep up with current affairs and general knowledge through newspapers, magazines, and reliable online resources.

5. **Regular Revision:**

Consistent revision is key to retaining knowledge and improving performance.