

## Fundamental of Electrical and Electronics Engg.

BRANCH :- ALL

These Questions are made for your previous exam, from PYQ and some internet....(Notes reference le Lena ek baar )

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 *Highly Expected + PYQ-Based + Practical Revision Set*

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### ✓ UNIT 1: Electrical Safety

1. What is basic electrical safety? (🔥PYQ Based)
2. List five major electrical hazards with examples.
3. What are the key features of PPE used in electrical work? (🔥PYQ)
4. What are the safety precautions while working with electrical equipment?
5. How would you rescue a person from electric shock?
6. Which fire extinguisher is used for electrical fires and why?

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### ✓ UNIT 2: Electrical Fundamentals

1. Define voltage, current, resistance and power with SI units.
2. State and explain Ohm's Law. (🔥PYQ + Confirmed Important)
3. Numerical:
  - Four resistors ( $3\Omega$ ,  $10\Omega$ ,  $5\Omega$ ,  $12\Omega$ ) in series with 120V.Find: (i) Total Resistance, (ii) Current, (iii) Voltage drop across each.
4. Difference between open, closed, and short circuit.
5. AC vs DC supply system – explain with examples.

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### ✓ UNIT 3: Protective Devices & Wiring

1. Why are protective devices necessary in circuits? (🔥PYQ)
2. Write short notes on:
  - Fuse
  - MCB
  - ELCB
  - RCCB
3. Pipe Earthing vs Plate Earthing
4. Name any four electrician tools and their uses.
5. What are the types of wiring systems used in homes?

## ✓ UNIT 4: Electrical Machines & Batteries

1. What is a Transformer? Explain its working principle. (🔥PYQ)
2. What are the differences between single-phase and three-phase induction motors?
3. Explain how to start and troubleshoot an induction motor.
4. Types of batteries and their applications.

## ✓ UNIT 5: Electronics & Digital Devices

1. Compare conductor, insulator and semiconductor with examples. (🔥PYQ)
2. Explain working and application of PN Junction Diode.
3. What is a Rectifier?
  - Difference between Half-wave and Full-wave Rectifier (🔥PYQ)
4. BJT – Construction, working & application.
5. What is the difference between sensor and actuator? (🔥Scoring)

## 📝 Most Expected Short Notes (Write Any 4)

- PN Junction Diode
- Rectifier
- Earthing
- Fuse vs MCB
- BJT
- Wiring System
- Sensor & Actuator
- Induction Motor

## 📌 Special Note for Revision:

- 💡 Diagrams: Transformer, Rectifier, Earthing, BJT
- 📖 Focus more on: Ohm's Law, PPE, Protective Devices, Transformer, Rectifier
- 🔥 High-chance repeat topics: Ohm's Law, PPE, Protective Devices, BJT