

S.B. Roll No.....

**BASIC ELECTRICAL ENGINEERING**  
**2<sup>nd</sup> Exam/ECE/MECHATRONIC/0961/Jan'2022**  
**(FOR 2018 BATCH ONWARDS)**

**Duration: 1.15Hrs.**

**M.Marks:25**

**SECTION-A**

**Q1. Attempt any three questions.**

**3x5=15**

- i. Explain ohm's law.
- ii. Explain lenz's law.
- iii. Explain the types of cells.
- iv. Explain the applications of lead acid batteries.
- v. Explain the advantages of AC over DC.
- vi. What do you mean by inductive reactance and capacitive reactance?
- vii. What is Kirchhoff's current law?

**SECTION-B**

**Attempt any one question.**

**1x10=10**

- Q2.** Define power factor. Explain disadvantages and causes of low power factor.
- Q3. a)** Explain advantages of electrical energy over other types of energy  
**b)** Explain the precautions that must be observed for proper working of lead acid batteries.
- Q4.** What is resistance? Explain factors upon which resistance depends.
- Q5.** Explain Faraday's first and second laws of Electromagnetic induction. Also explain Faraday's Experiment to demonstrate the electromagnet induction.