**102001203:** **Basics of Electrical & Electronics Engineering**

**ASSIGNMENT-1**

1. Explain independent & dependent source.
2. Explain OHM’s law with its limitation.
3. Derive equation for star to delta transformation method.
4. Derive equation for delta to star transformation method.
5. Explain Kirchhoff’s law with example.
6. Diagram, schematic

   Description automatically generatedFind the current from each resistor using Kirchhof’s law.
7. Find the equivalent resistance between A & B.

Diagram

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1. Write down Faraday’s first and Second law.
2. State the lens’s Law.
3. Define the term self-inductance. Derive the equation of Magnitude of self-induced emf & coefficient of self-Inductance in detail.
4. Derive the equation of Magnitude of Mutually induced emf & coefficient of Mutually Inductance in detail.
5. Derive the equation of Coefficient of Coupling.
6. Derive equation of parallel plate Capacitor & Composite parallel plate capacitor.
7. Derive the voltage & current equations during capacitor charging condition in RC circuit.
8. Derive the voltage & current equations during decaying of current in RL circuit.
9. Comparison among R, L,C,RL & RC circuit.