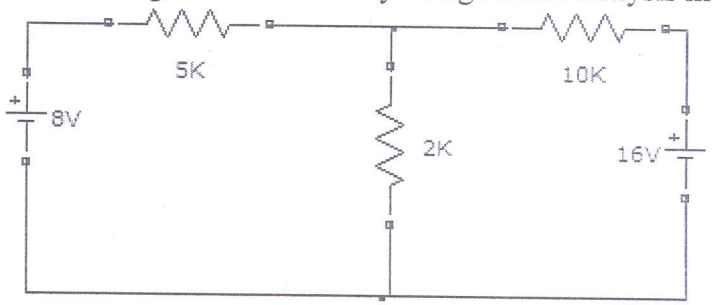
Mid Semester Examination-2015
School of Electrical Engineering

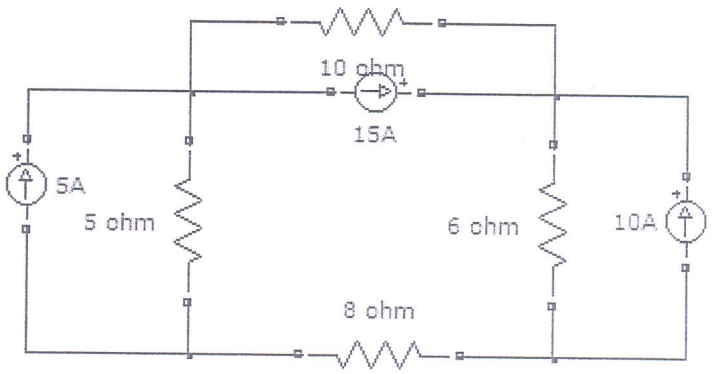
Sub: Electrical Science (EE-1001) Branch: All
Maximum Marks- 25 Times: 2hrs

Instructions: Answer any Five including Question no 1. Answers should be in brief in one place and write answers of the questions serially. The figures in the margin indicate full marks.

1. a. Draw the single line diagram of typical AC supply scheme. [5×1
   b. Write the type of measuring instruments with two examples each.
   c. Write the different power system components.
   d. Give reasons for: i) Voltmeter is always connected in parallel with the circuit. ii) It is preferred AC transmission to DC.
   e. Define the following quantities:
   Active elements, Elastance, Phot, Multiplying power
2. a. Explain the working principle with neat diagram for dynamometer type Wattmeter. [2.5×2
   b. Find the Current through 5KΩ resistor by using Mesh Analysis method.



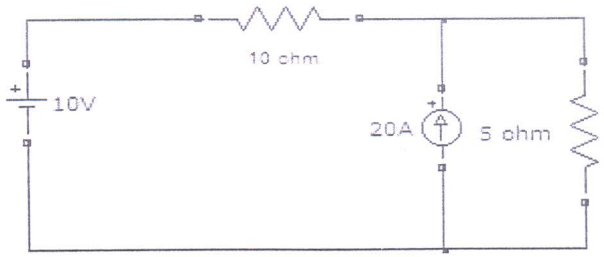
3. a. Find the current in 8Ω resistor for the circuit shown by applying superposition theorem. [2.5×2



   b. Explain the various techniques by which damping torque is produced in an Electrical measuring instruments.

4 [2.5×2

a. Find the current in 10Ω resistor for the circuit by applying Norton's theorem.

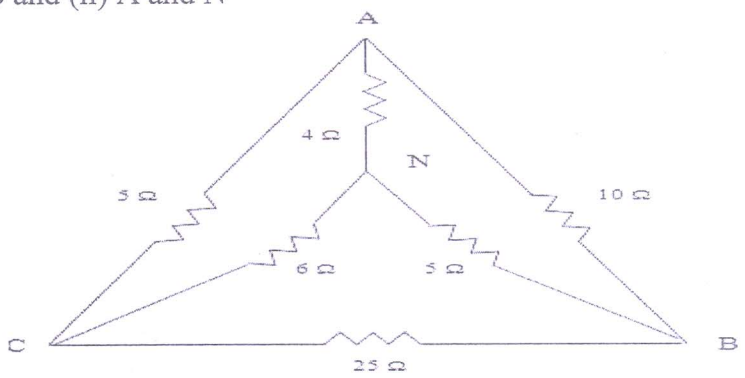


b. Sketch Sodium vapour lamp and write the different parts.

5 a. A moving Coil Instrument gives a full scale deflection of 20 mA when Potential Difference across its terminal is 200mV.Calculate i)the Shunt resistance for measuring current up to 20A ii)Series resistance for measuring voltage up to 400V. [2.5×2

b. Draw the sketch of lay out Thermal power station.

6 a. For the circuit shown find the equivalent resistance between (i) A and B and (ii) A and N [2.5×2



b. Compare Hydro, Steam & Nuclear Power Plant highlighting five points.

7. Write Short notes on any two [2.5×2

a. Pipe earthing with diagram.
b. Types of wiring with examples.
c. Thevenin's Theorem with example
d. Induction type Energy meter

:: BEST OF LUCK::