

## DC. Circuit FAQs Semester-2(DEE)



- ✓1. Define Electric charge.
- ✓2. Define work and power.
3. What is linear and non linear network?
- ✓4. Define resistivity. Write its symbol and unit and explain factors affecting it.
5. Write effect of temperature on resistance.
- ✓6. State kirchoff's voltage law kirchoff's current law.
7. List types of capacitors & inductors.
- ✓8. What do you mean by Linear & Nonlinear circuit, Active and Passive Network
9. State Thevenin's theorem with example.
10. State Reciprocity theorem with example.
11. State and explain superposition theorem with example.
12. State Ohm's law and its limitation.
13. Write joule's law of electric heating.
14. Explain lenz's law.
15. State and explain Faraday's law of electromagnetic inductance
16. Explain Coulomb's law.
- ✓17. Define following term (1) Network (2) loop (3) Branch (4)Active element
18. State the special features of series and parallel circuit.
19. Find the current flowing through the  $4 \Omega$  resistor in fig 1 using Thevenin's theorem.
20. Calculate the current flowing through the  $4 \Omega$  resistor in fig. 2 using Thevenin's theorem.
21. Find the current flowing through the  $4 \Omega$  resistor in fig. 3 using Norton's theorem.
22. Explain star to delta transformation
23. Compare electric circuit and magnetic circuit
24. Give comparison between conductor, semiconductor and insulator.
- ✓25. Explain duality between series and parallel circuits.
26. Obtain the equation for equivalent capacitance of three capacitors connected in parallel.
27. Derive formula for energy stored in magnetic field
28. Write the equation of equivalent inductance when two coils are connected in (1) Series addition (2) Series opposition.
29. Define phenomenon of electromagnetic induction

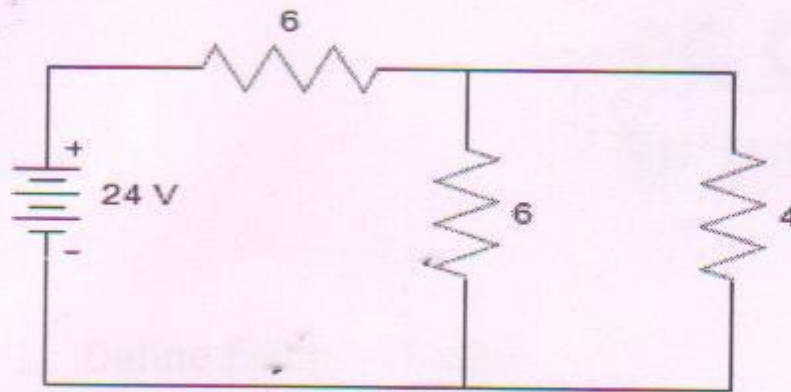


Fig 1 all resistance value in ohm

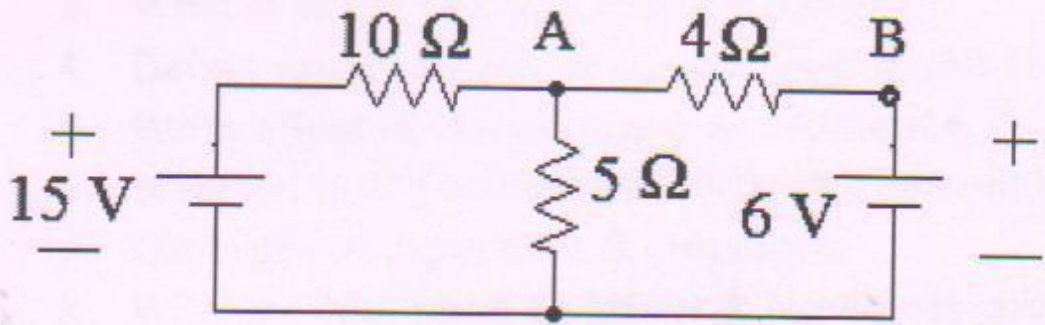


Fig. 2

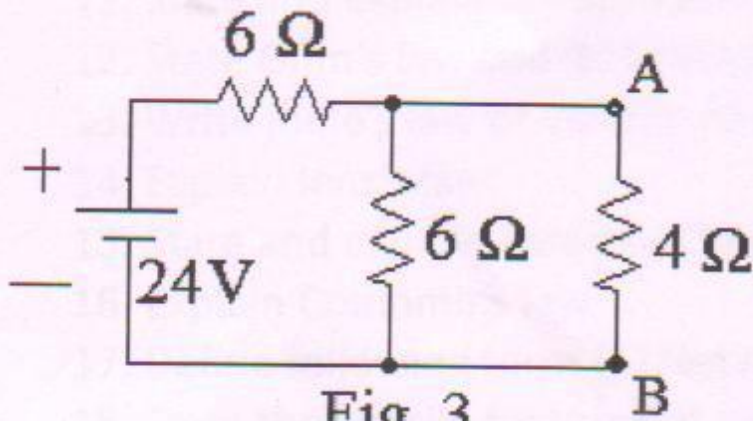


Fig. 3