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|-----|--|---------|----|-------|
| | A) | 1/2 A | B) | 1 A |
| | C) | 2 A | D) | 4 A |
| 9. | The conductance of an 8 ohm resistance is | | | |
| | A) | 12.5 mS | B) | 8 mS |
| | C) | 12 S | D) | 125 S |
| 10. | A capacitor stores 0.24 coulombs at 10 volts. Its capacitance is | | | |
| | A) | 0.024 F | B) | 0.6 F |
| | C) | 1.2 F | D) | 2.4 F |

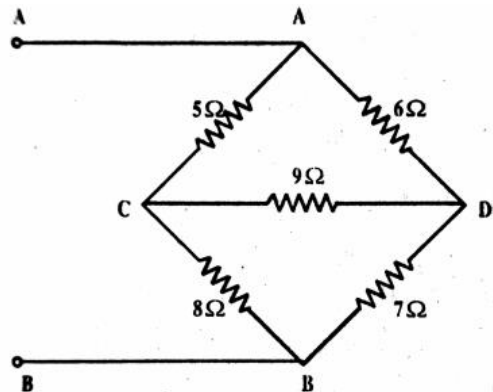
Part – II Shorts Questions

(1 & 2 Marks)

1. Define the following and give their units of measurement
(i) Resistance. (ii) Electric Potential. (iii) Electric current.
2. State the following:
(i) Kirchoff's laws. (ii) Ohms law.
3. What do you mean by linear and nonlinear elements?
4. What is meant by active and Passive elements?
5. Define SuperPosition theorem?

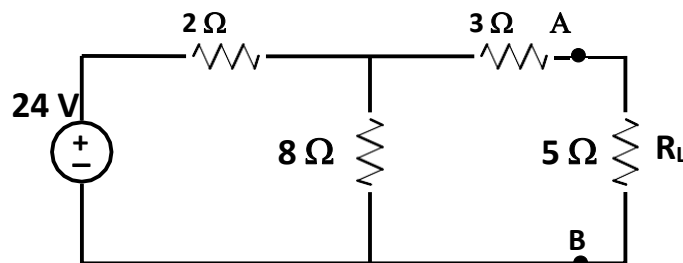
Part – III Examples

1. Calculate the value of the equivalent resistance between A and B of the circuit shown in fig. by using delta/star transformation.



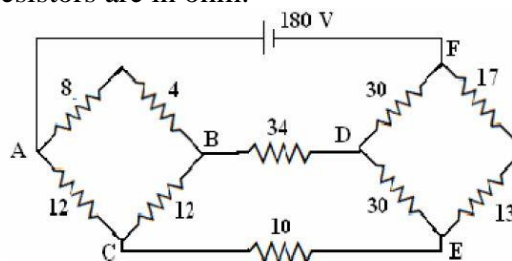
ANS. 6.4837 Ω

2. Solve the circuit using Norton's theorem and Thevenin's Theorem and find the load current through R_L



ANS: $I_L = 2 \text{ A}$

3. Calculate the current flowing through the 10Ω resistor of circuit shown below, by using any method. Values of resistors are in ohm.



Part – IV Long Questions

(Only For Preparation)

1. Derive the equivalent star circuit from a delta circuit.
2. Explain voltage divider rule and current divider rule with necessary circuit.
3. Give the comparison between series resistance circuit and parallel resistance circuit.

***Notes: Students have to write only Part I, Part II, Part III**