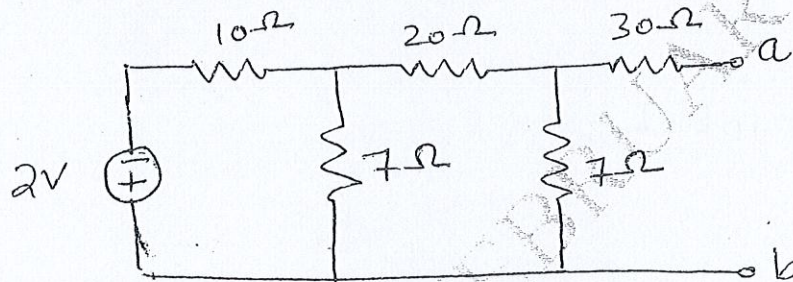


Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. CO indicates Course Outcomes.

- Q1. (a). Obtain a value for the Thevenin equivalent resistance seen looking into the open terminals of the given circuit by first finding  $V_{oc}$  and  $I_{sc}$ .

[4]  
[CO-3]

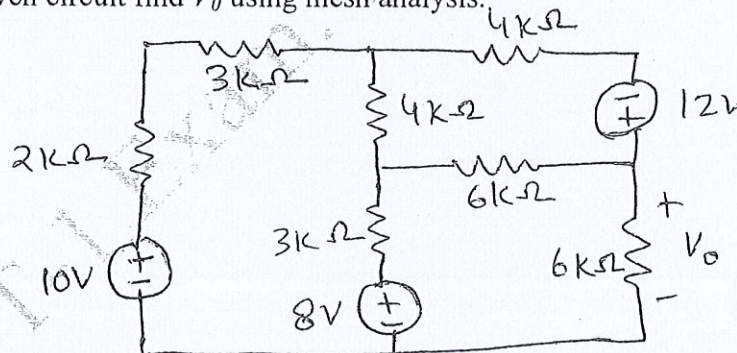


- (b). Write down the statement of Super position theorem.

[1]

- Q2. (a). In the given circuit find  $V_o$  using mesh analysis.

[4]  
[CO-1]

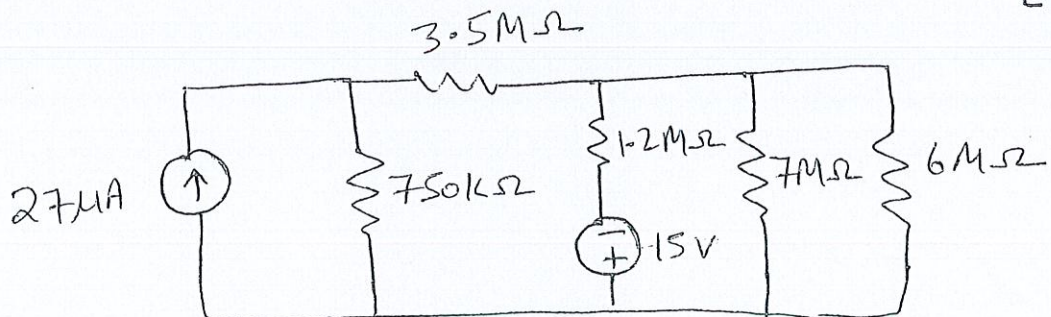


- (b). What is Maximum power theorem?

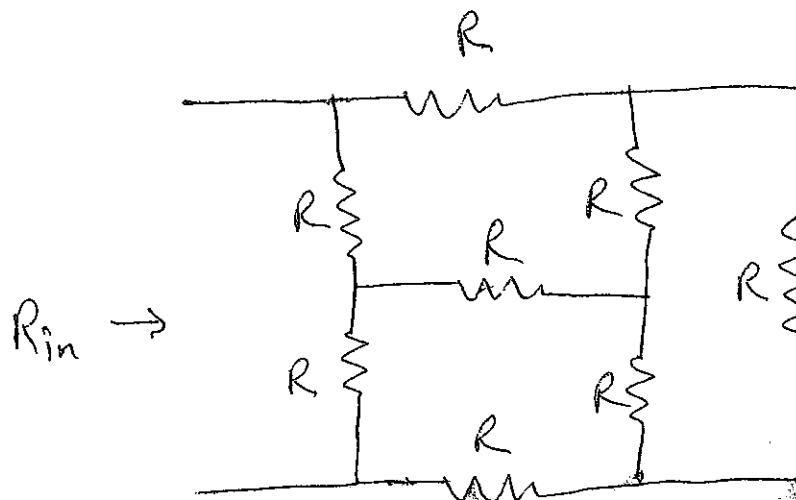
[1]

- Q3. (a). Using repeated source transformation, reduce the given circuit to a voltage source in series with a resistor, both of which are in series with the  $6M\Omega$  resistor.

[3]  
[CO-1]



(b). Determine the effective resistance  $R_{in}$  of the given network. Each resistance is of  $10k\Omega$  [2]



$$R = 10k\Omega$$

UNIT 7 - 1 EXAM FEBRUARY 2020