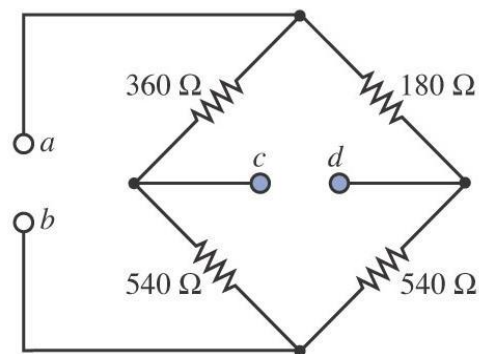**ENGG104 Tutorial 11 Class Questions [past exam questions]**

Team Name: _____

QUESTION 1 –

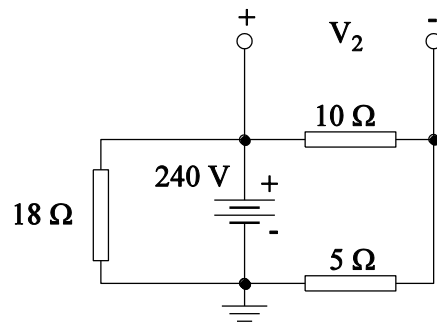Determine the equivalent resistance, R_{eq}, looking in at terminals marked *a* and *b* when:

(a)   terminals *c* and *d* are open circuited, and
(b)   terminals *c* and *d* are short circuited.
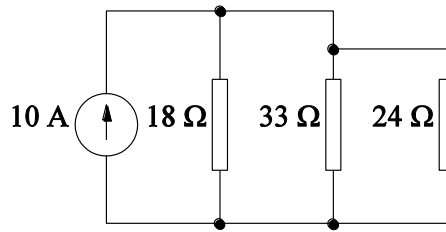
QUESTION 2 -

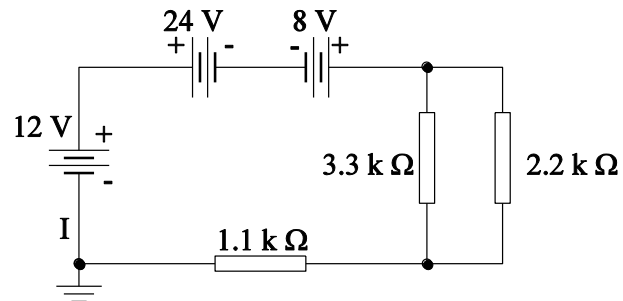Using the voltage divider rule, determine the voltage V_2.

QUESTION 3 –

(a) Determine the current in the 24 Ω resistor.
(b) What is the voltage across the current source?

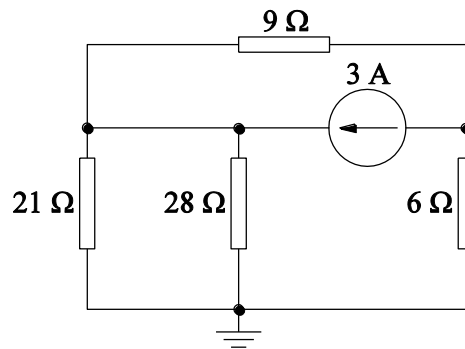**QUESTION 4 –**

(a)   What is the magnitude and the direction of the current I?
(b)   What is the voltage across the 3.3 kΩ resistor?

QUESTION 5

Using Nodal Analysis techniques, write the equations for the
node voltages using the system ground as the reference node.
Indicate the node voltages on the diagram. Solve for the nodal
voltages

$9\,\Omega$

$3\,A$

$21\,\Omega$ $28\,\Omega$ $6\,\Omega$

QUESTION 6

Find the

(a) Thévenin equivalent circuits for the network external to the resistor R_L.