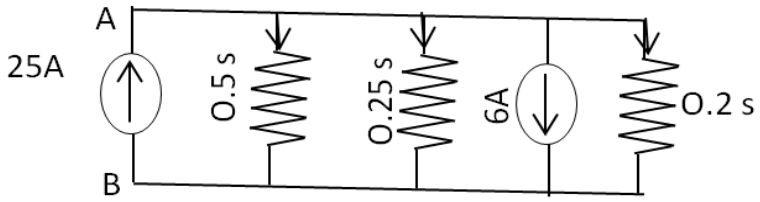
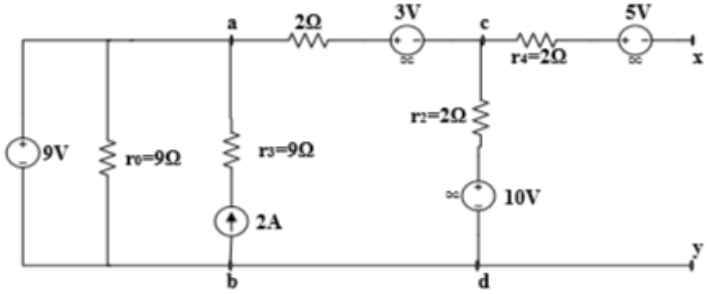
ASSIGNMENT 1

Each question contains 3 marks. Total = 30

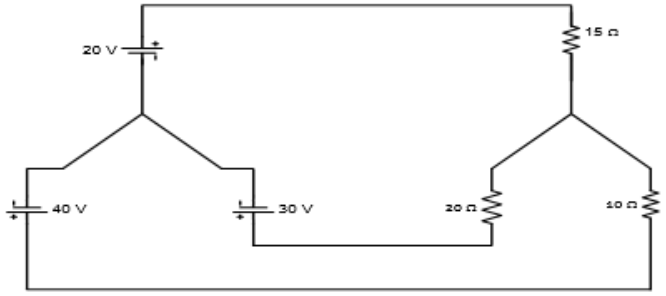
1. Compute the current in each branch of the network shown. What is potential difference between point A and B?



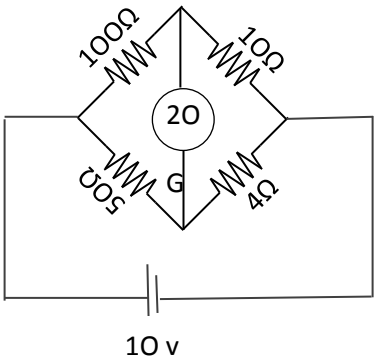
2. Obtain Thevenin's equivalent circuit across x-y in the figure.



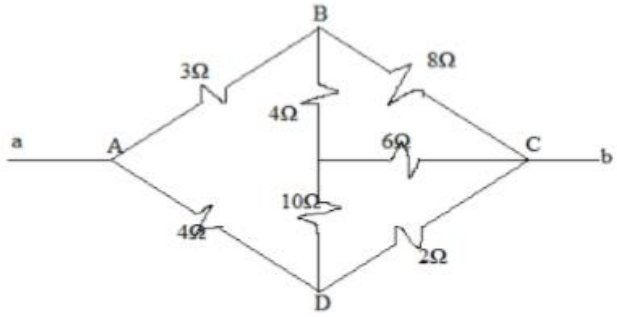
3. Using superposition theorem, find the current in each branch of the network shown.



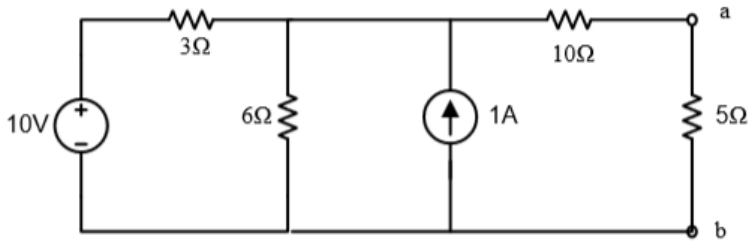
4. Use Thevenin's Theorem find current through galvanometer.



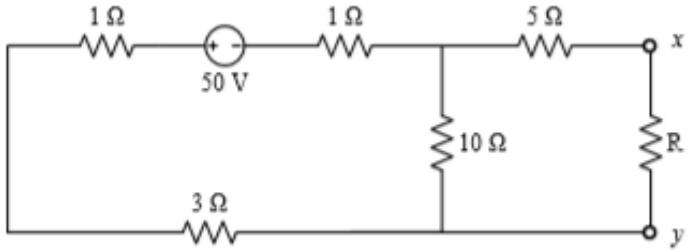
5. Find equivalent resistance between a and b.



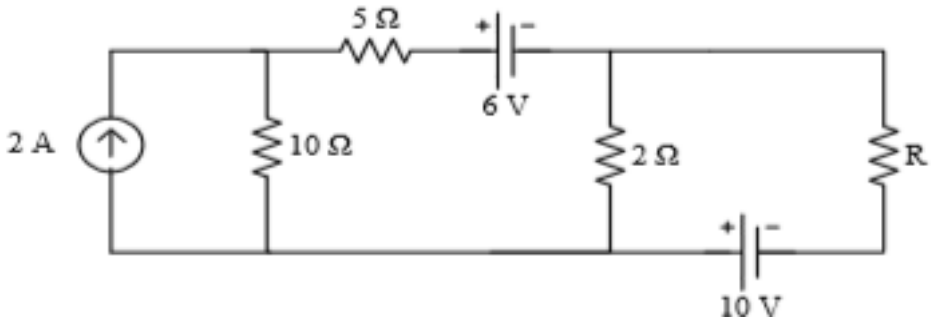
6. Use Norton's Theorem Find the current in the 5 Ω resistor for the network shown.



7. Assuming maximum power transfer find the source to R, find the value of this amount of power in the network shown.



8. Find R to have maximum power transfer in the network shown. Also obtain the amount of maximum power.



9. A delayed half-waved rectified sinusoidal current has an average value equal to half its maximum value. Find the delay angle α.

10. Two impedance $Z_1 = 8 + j6\ \Omega$ & $Z_2 = 3 - j4\ \Omega$ are in parallel. If the total current of the combination is 25A.Find the current taken and power consumed by each impedance.

Refer to the Rubrics in the following page while preparing the assignment.

Rubrics for evaluation:

	Level A	**Level B**	**Level C**	**Level D**
Completion	All parts are completed neatly and correctly.	Most of the parts are completed.	Some of the parts are complete.	Student did not turn in assignment.
Understanding	All the answers are correct. All work is meticulously shown.	Most of the answers are correct. Most of the work is meticulously shown.	Some of the answers are correct. Some steps for problem solving are missing.	Little to none of the answers is correct. Most part of the necessary steps is missing.
Neatness	The assignment is in an orderly packet with figures properly drawn with pencil and inclusion of printed graphs and codes wherever necessary.	The assignment is in an orderly packet with figures but not drawn with pencil and inclusion of printed graphs and codes wherever necessary.	The assignment is not very orderly and figures are badly drawn and only some of the graphs and codes are included.	The assignment is disorderly with no properly drawn figures and absence of the necessary graphs and codes.
Timeliness	Received on due date.	Received 1 day later	Received 2 days later	Received 3 days later