SUBJECT: BEEE

DATE and TIME: 20/09/2014, 08:30 am

TOTAL MARKS: 20

DURATION: 1 HOUR

Q. 1. Solve any five. (Each question carries 2 marks)   **(10 M)**

a) Thevenin's equivalent resistance R_{TH} for the network shown in the given figure is known to be 2Ω. Evaluate R.
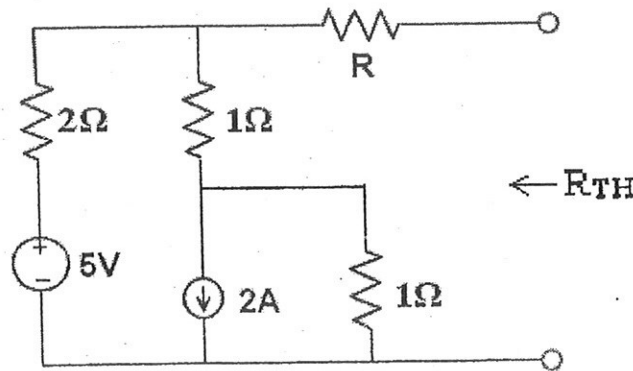

Figure 1.

b) State and explain maximum power transfer theorem

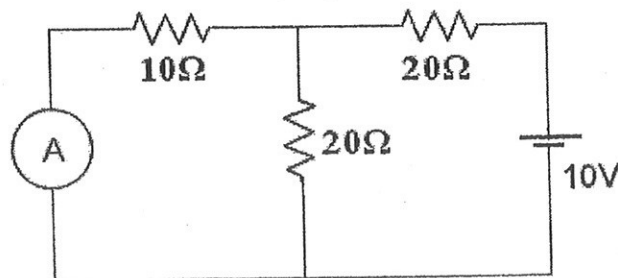c) Find the current flowing through the ammeter for the given circuit.

Figure 2.

1

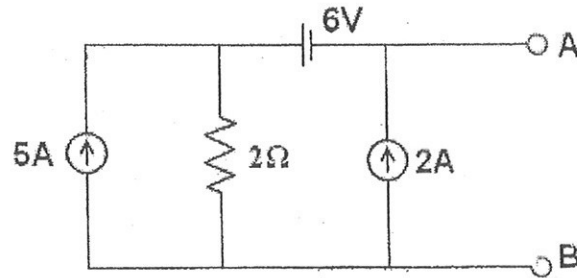d) Modify the circuit into one source and resistance to the left of points A and B.

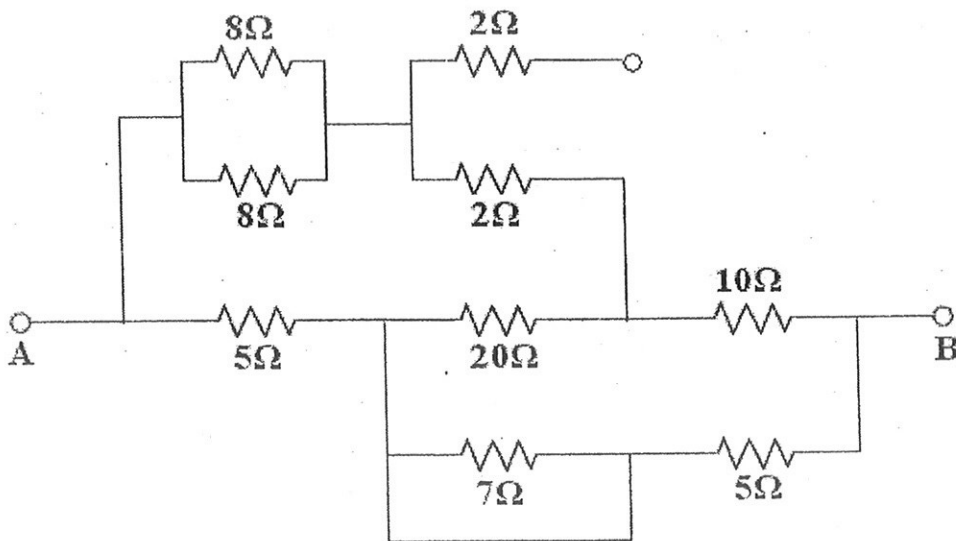Figure 3.

e) Estimate the value of resistance between A and B.

Figure 4.

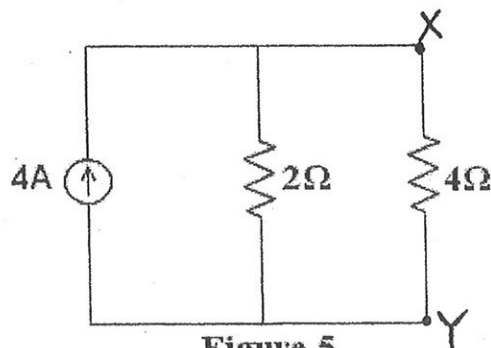f) Evaluate the current flowing in branch XY.

Figure 5.

2

Q. 2.

a) Compute the current in 15Ω resistance using Thevenin's theorem.   (5M)
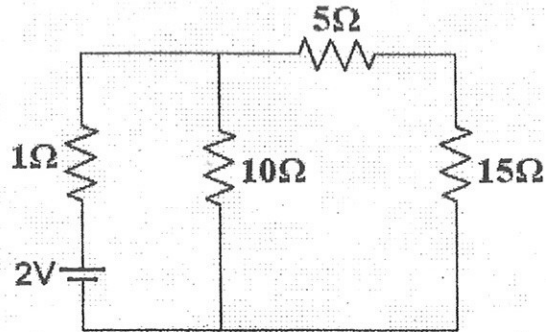

Figure 6.

Or

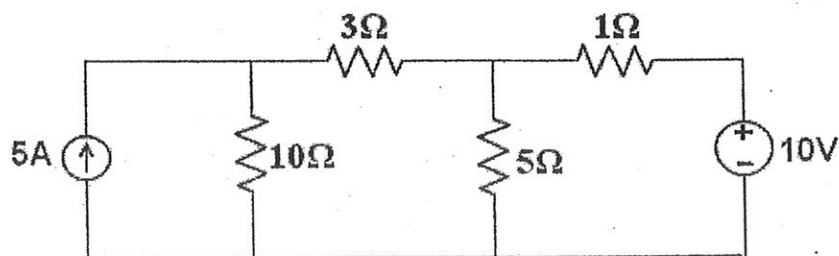b) For the network given below find the current through 3Ω resistor using Nodal analysis   (5 M)

Figure 7.

3

Q. 3.

a) Compute the current in 1Ω resistor using Superposition theorem.   (5M)
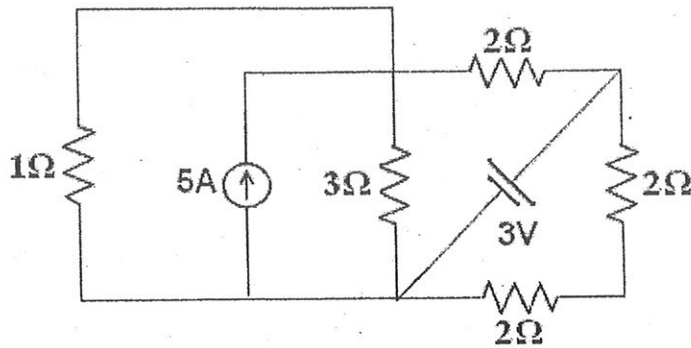

Figure 8.

Or

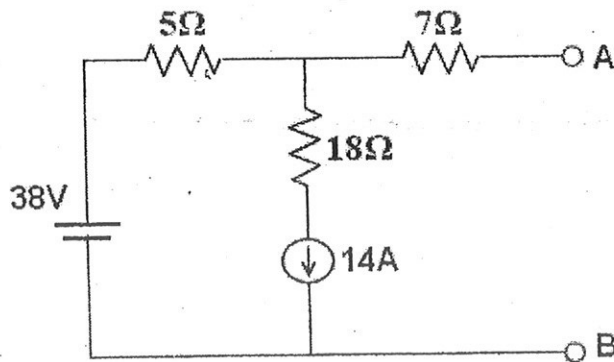b) Develop Norton's equivalent circuit across A and B.   (5M)

Figure 9.