Department of Mechanical Engineering
Sessional 1ˢᵗ (Mechanical Engg. and Robotics & AI Engg. 1ˢᵗ Semester)
Basic Electrical Technology (ESC101A)

Time: 1:30 hrs   M. Marks: 15

Note: Part –Attempt any three questions.

Q.1) By using mesh analysis, determine the current supplied by each battery in the given   (5)
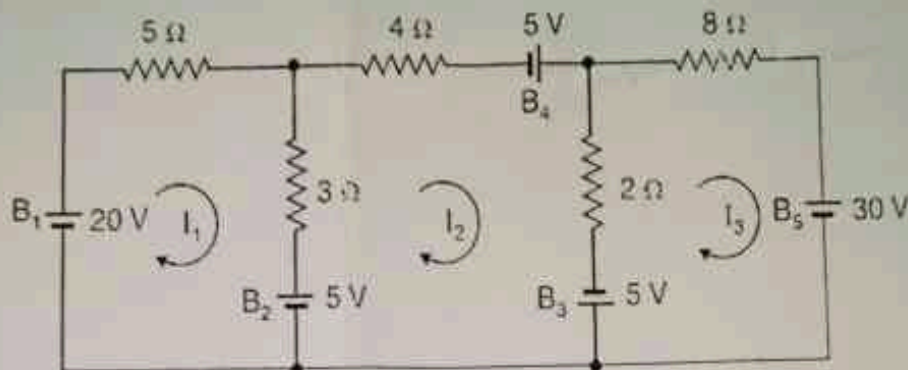circuit. (CO1)

Fig-1

Q.2) State and explain maximum power transfer theorem. Derive the condition for   (5)
maximum power transfer. State the applications of maximum power transfer
theorem. (CO1)

Q.3) Determine voltage across the 4Ω resistor using superposition theorem, in the circuit   (5)
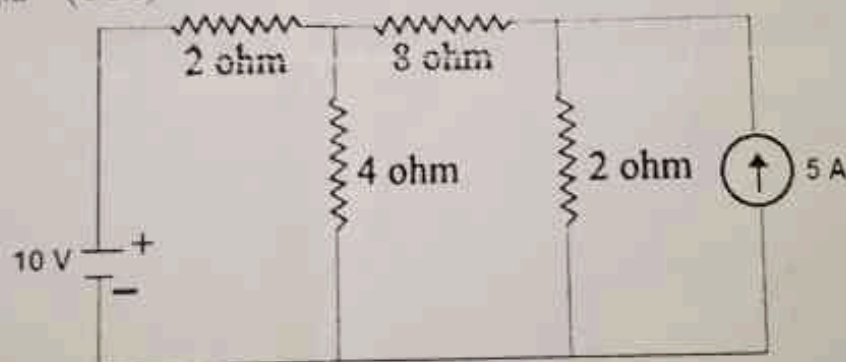shown in Fig.2   (CO1)

Fig-2

Q.4) Determine the current flowing in 4 ohm resistance using Thevenin's theorem in the   (5)
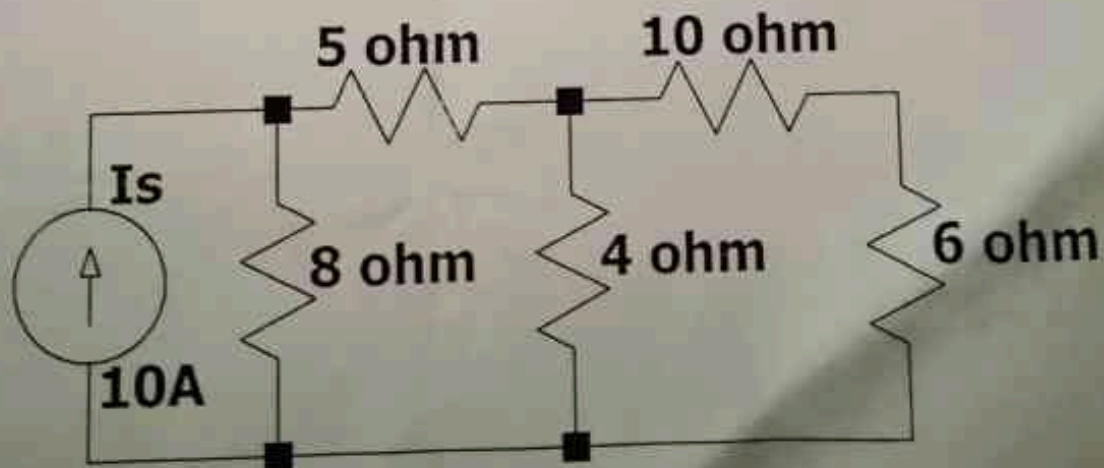network shown in fig.3   (CO1)

Fig-3