



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

InSem Examination-II Summer2025	
Exam Seat No.:	
Academic Year:2024-2025	Semester:IV
Class:SY	Program:B.Tech
Branch Code:ELE	Pattern:2023
Name of Course:Electrical Network Analysis	Course Code:2306211
Max. Marks:30	Duration:1.15 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

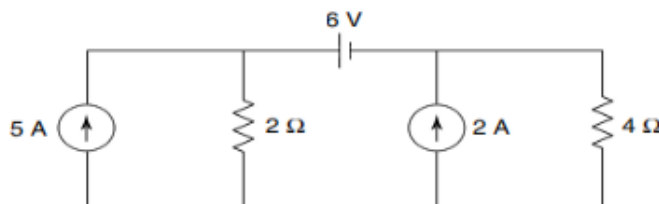
1. This question paper contains 2 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

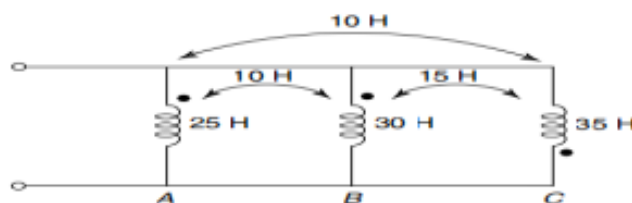
- 1 a) a) Find the current in the 4 Ohm resistor shown in network of Figure.

(7) CO2



OR

- b) Find the equivalent inductance of the network shown in Figure



Question No. 2

- 2 a) Compare different types of sources in Electrical network with suitable diagram and its characteristics.

(8) CO1

OR

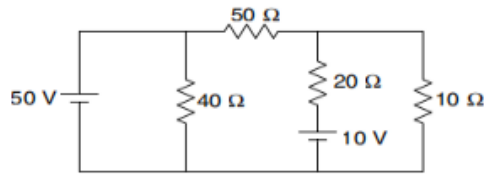
- 2 b) Explain the concept of Supermesh and Supernode analysis.

(8) CO1

Question No. 3

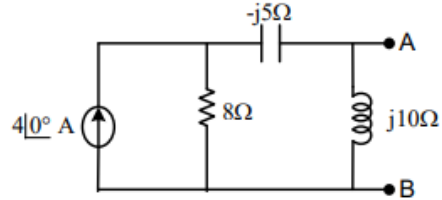
- 3 a) a) Find the current in the 10 ohm resistor in Figure using Nortons theorem

(7) CO2



OR

b) Find the Thevenin's equivalent circuits at the terminals a-b for the circuit shown in Figure.



Question No. 4

- 4 a) State and explain the Maximum Power Transfer theorem and hence derive the expression for maximum power transferred (8) CO1

OR

- 4 b) State and explain the Reciprocity theorem with suitable example. (8) CO1

..... End of question paper.....