

Ajay Kumar Garg Engineering College, Ghaziabad

Department of Electrical and Electronics Engineering

Sessional Test-1

Course: B.Tech
 Session: 2024-25
 Subject: Fundamentals of Electrical Engineering
 Max Marks: 25

Semester: II
 Section: S-11 to S-20
 Sub. Code: BEE 201
 Time: 1 hour

OBE Remarks: All questions are related to CO1.

Q.No	1	2	3	4	5	6	7
CO No.	CO1	CO1	CO1	CO1	CO1	CO1	CO1
Bloom's Level* (L1 to L6)	L1	L1	L2	L3	L3	L1	L2

*Bloom's Level: L1: Remember, L2: Understand, L3: Apply, L4: Analyze, L5: Evaluate, L6: Create

Note: Answer all the sections.

Section-A

A. Attempt all the parts.

(3x2 = 6)

1. Differentiate between ideal voltage source and practical voltage source.
2. Describe briefly unilateral and bilateral elements with examples.
3. Find I_1 in the circuit shown in Fig. 1.

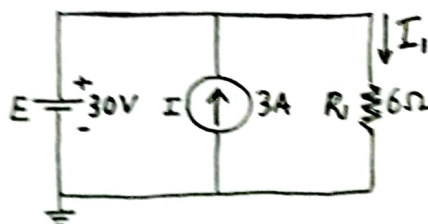


Figure 1

Section-B

B. Attempt all the parts.

(3x4 = 12)

4. Using nodal analysis find current I in the circuit shown in Figure 2.

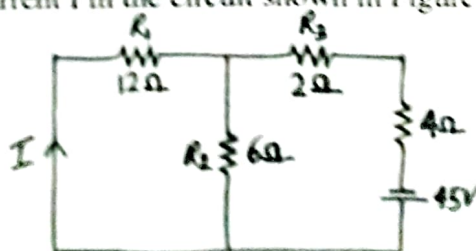


Figure 2

5. Explain the procedure of mesh analysis with the help of an example.
6. Using source transformation find current in 4Ω resistor in the circuit shown in Figure 3.

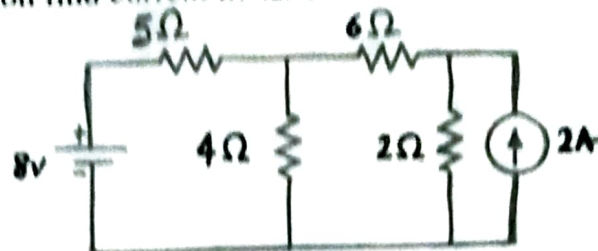


Figure 3

Section-C

C. Attempt **all** the parts.

(1x7 = 7)

7. Find the current I using mesh analysis in the circuit shown in Figure 4.

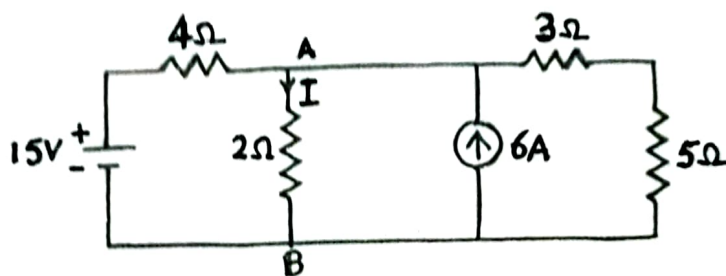


Figure 4


Faculty Sign


HOD Sign