MANJARA CHARITABLE TRUST

RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI

Department of Applied Sciences & Humanities

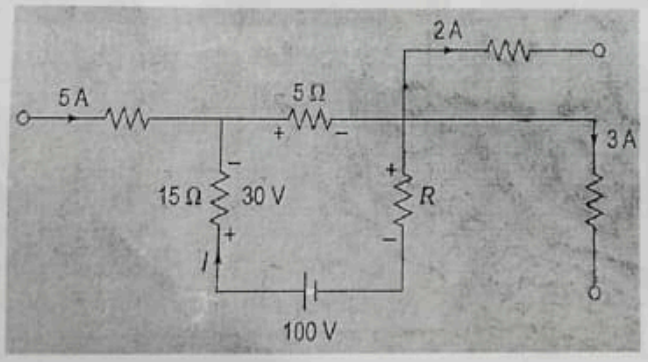
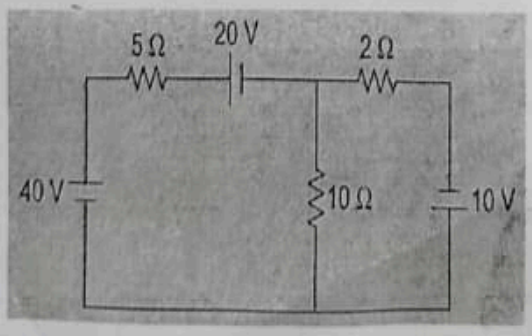
INTERNAL ASSESMENT BEEE (IA) - I

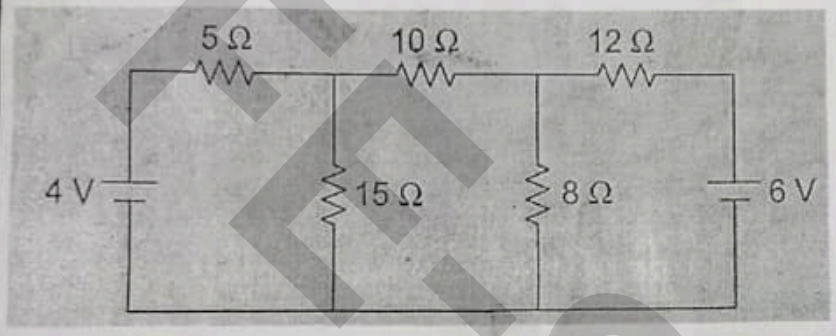
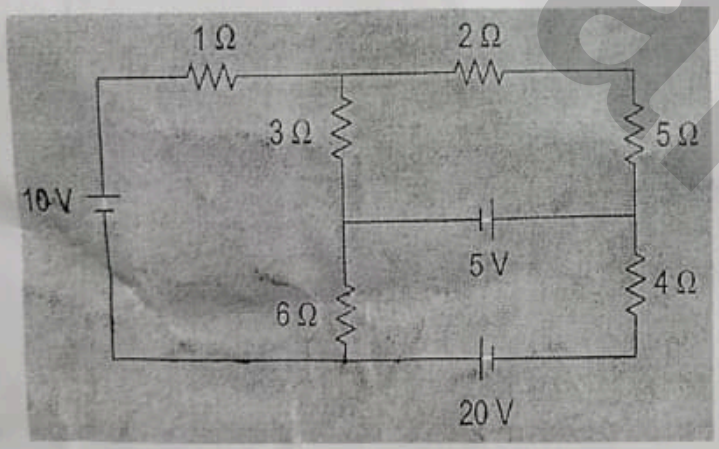
Date: - 17/10/2025

Max. Marks: 20	**Duration:** 1 hrs
Class: FE	
Name of the Course: Basic Electrical and Electronics Engineering	
Branch: All	

Instructions:

1. Question 1 is **compulsory for 10 Marks (5 questions of 2 marks)**
2. From Question 2 (**Solve any one**)
3. From Question 3 (**Solve any one**)
4. Figures to the right of the question indicate full marks.
5. Assume the suitable data wherever necessary.
6. Illustrate your answers using neat diagrams wherever necessary.

Questions	Maximum Marks	Bloom's Taxonomy Level	Course Outcomes
Q1. i. The voltage drop across the 15 Ω resistor is 30V, having the polarity indicated. Compute the value of R 	2	3	CO1
Q1. ii. Calculate the value of V_{TH} when current flowing through 2 Ω by Thevenin's theorem. 	2	3	CO1

Q1. iii. Discuss the steps to be used for analysis of Thevenin's theorem.	2	1	CO1
Q1. iv. What is LED? Draw the construction of LED.	2	1	CO5
Q1.v. What is BJT? Draw the common emitter (CE) configuration diagram	2	1	CO6
Q2. a. Find the value of current flowing through 8Ω resistor by using superposition theorem. 	5	3	CO1
OR			
Q2. B Calculate the value of current flowing through 5Ω resistor using mesh analysis 	5	3	CO1
Q3. A How zener diode can be used as voltage regulator? Explain.	5	2	CO5
OR			
Q3. B. Draw and discuss the construction and operation of n-channel FET.	5	2	CO6

EE-Sahyog