B.Tech Mid Semester Examination 2023

Name of the course: B.Tech
Name of the Paper: Basic Electrical Engineering

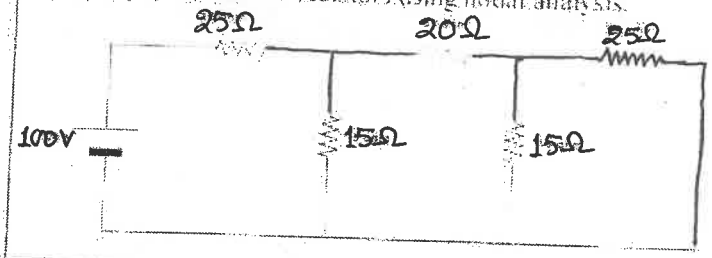
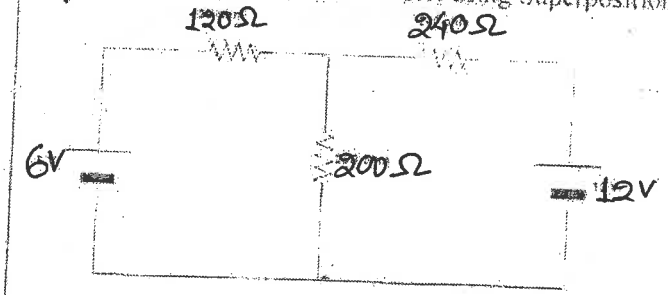
Semester: I
Course Code: TEE-101

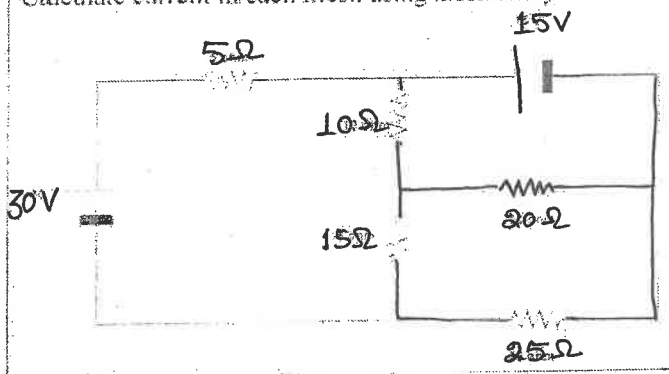
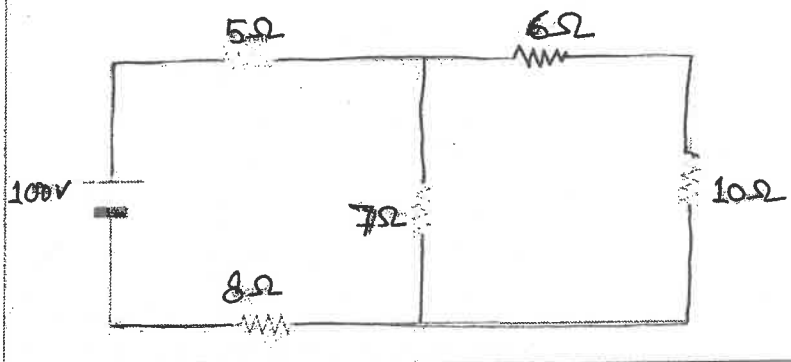
Time: 1:30 Hrs

Maximum Marks: 50

Note:

(i) Answer **all the questions** by choosing ***any one of the sub questions.***
(ii) Each question carries 10 marks.

Q1		(10 marks)	
a)	Write short note on: (a) Kirchhoff's Law with examples (b) Ohm's Law		
	OR		
b)	Calculate Current in all resistors using nodal analysis. 		CO 1
Q2		(10 marks)	
a)	Define: a) Charge b) Electric current c) Power d) Network & e) Circuit.		
	OR		
b)	Calculate current in 240 ohm resistor using Superposition theorem. 		CO 2
Q3		(10 marks)	CO 2

a)	Calculate current in each mesh using mesh analysis.  	
	OR	
b)	State the Superposition theorem and write steps to solve the superposition theorem using suitable example.	
Q4	(10 marks)	
a)	Differentiate between Thevenin's and Norton's theorems with suitable circuit diagrams and equations.	CO1
	OR	
b)	Calculate current in 10 ohm branch using thevenin's theorem.  	
Q5	(10 marks)	
a)	What is power? Define Active, Reactive and Apparent Power with power triangle.	CO2
	OR	
b)	An alternating voltage is given by $V=230\sin 314t$. Calculate a)Frequency b) Maximum value c) Average value d)RMS value	