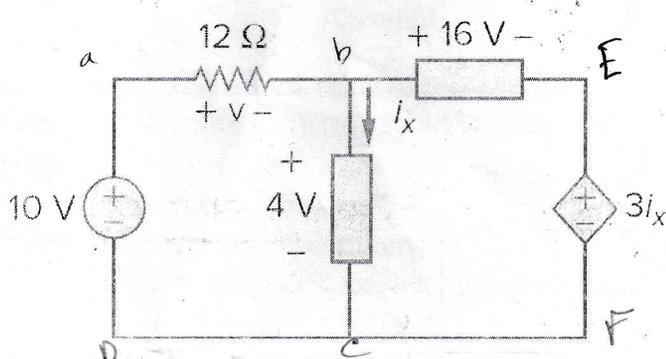
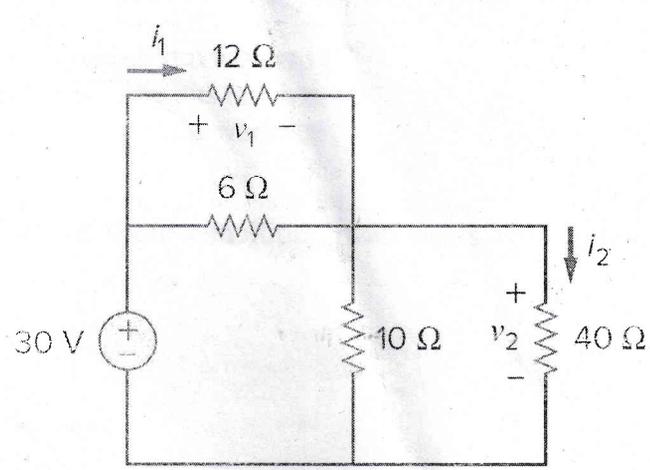


**University of Information Technology & Sciences (UITS)**  
**Faculty of Science and Engineering**  
**Department of Computer Science and Engineering**  
**Program: B.Sc. in CSE**  
**Mid Term Examination, Spring 2025**  
**Course Title: Fundamental of Electrical Engineering**  
**Course Code: EEE 0713121**

Marks: 20

Time: 1(One) hour

(Answer all questions)

Q. No.	Questions	Marks
1. a)	<p>Calculate <math>v</math> and <math>i_x</math> in the circuit of figure 1(a).</p>  <p style="text-align: center;">Figure 1(a)</p>	[04]
b)	<p>Calculate <math>v_1</math>, <math>v_2</math> and <math>i_1</math>, <math>i_2</math> in the circuit of figure 1(b) using Voltage Divider and Current Divider rule.</p>  <p style="text-align: center;">Figure 1(b)</p>	[06]

$-10 + 12i_1 + v$

2. a) Determine the equivalent resistance at the terminal a-b for the circuit in figure 2(a). [05]

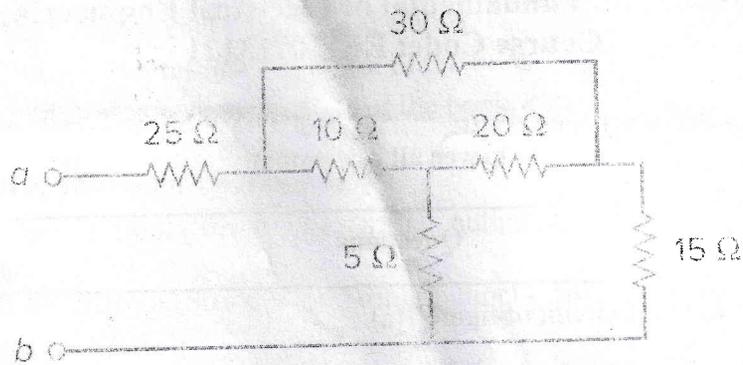


Figure 2(a)

b) Calculate  $v_0$  and  $i_0$  in the circuit of figure 2(b). [05]

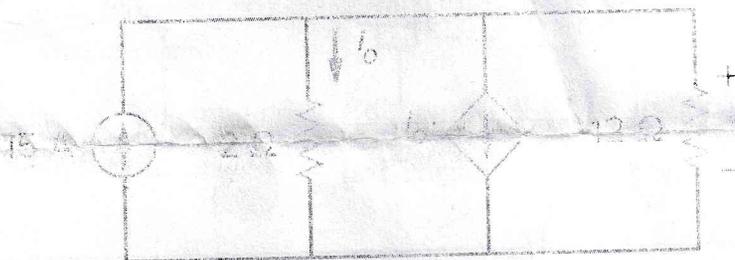


Figure 2(b)

Handwritten notes for Figure 2(b):  
 $i_0 = \frac{10}{6}$   
 $v_0 = 15^-$