
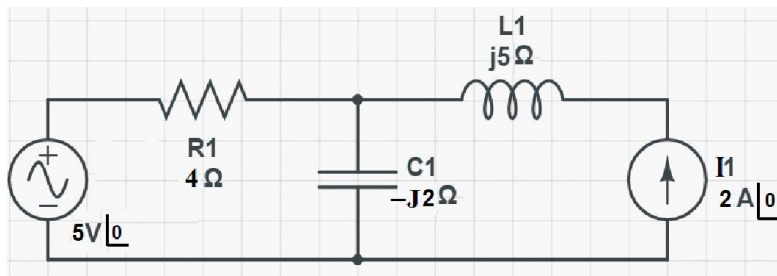


<b>The Higher Technological Institute (HTI)</b>				
<b>Department of Mechatronics Engineering</b>				
Subject:	Electrical circuit theories	Code:	<b>MTE 111</b>	
Examiner:	Dr. Moataz M. Elsherbini	Time:	90 min	
Exam Type:	Final term - exam Group <b>61</b>	Term:	6/5/2018	

**Q1. Find the voltage across  $C_1$  in figure (1) using the following 4 methods:**

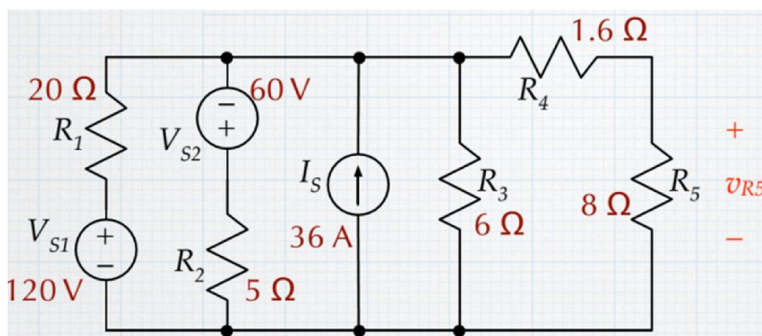
- i. Mesh loop method **[5 marks]**
- ii. Source transformation method **[5 marks]**
- iii. super position method **[5 marks]**
- iv. Thevenin's method **[5 marks]**



**Figure (1)**

**Q2. Find  $V_{R5}$  in figure (2) using the following 3 methods:**

- i. Source transformation method **[6 marks]**
- ii. super position method **[6 marks]**
- iii. Thevenin's method **[8 marks]**



**Figure (2)**