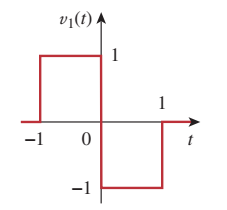
The Islamia University of Bahawalpur

**University College of Engineering & Technology**

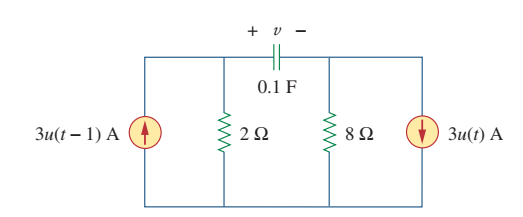
**Department of Electrical (Power) Engineering**

|  |  |
| --- | --- |
| B.S. Electrical (Power) Engineering | Time Allowed: 75 minutes |
| Midterm Examination, 16th April, 2019 | Max. Marks: 30 |
| Course: Electrical Network Analysis (ELEN-01207) | Instructor: Engr. M. Javed Hanif |
| Note: Attempt all questions. | |

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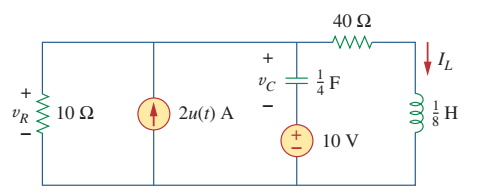
Q.No.1: [CLO1: Marks 2]

Express the signals in terms of singularity functions.

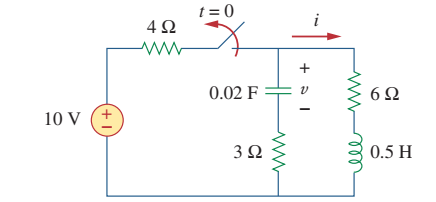


Q.No.2: [CLO2: Marks 5]

Determine v (t) for t >0 in the circuit if v (0-)=0.

Q.No.3: [CLO2: Marks 10]

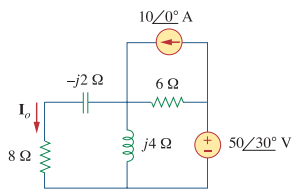
Determine:  
 (a) *iL(0+), vc(0+) and vR(0+)*  
 (b) *and*   
 (c) *iL(), vc() and vR().*

Q.No.4: [CLO2: Marks 5]

Find i(t) in the circuit. Assume that the circuit has reached steady state at t=0--.

Q.No.5: [CLO1: Marks 3]

Find current **I0** using the superposition theorem.



Q.No.6: [CLO3: Marks 5]

Find the value of parallel capacitance needed to correct a load of 140 kVAR at 0.8 lagging pf to unity pf. Assume that the load is supplied by a 120-V (rms), 50-Hz line.