

Reg. No.:

Name :

VIT[®]

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test I – March 2023

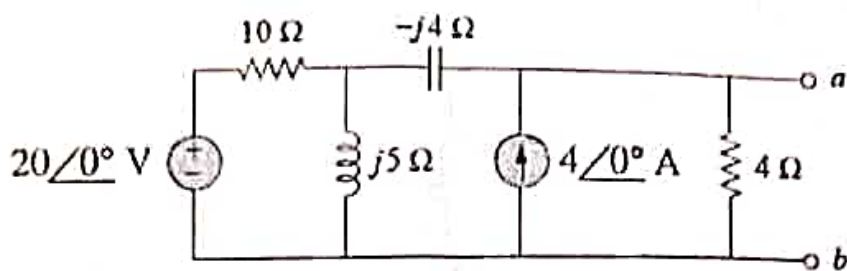
Programme	: B.Tech (ECE/ECM)	Semester	: WS 2022-23
Course	: Circuit Theory	Code	: BECE203L
Faculty	: Dr. ASHISH KUMAR Prof. KRITHIKA ALIAS ANBU DEVI M Prof. SRINIVASAN R Dr. NIRAJ KUMAR Dr. USHA RANIS Dr. M SARANYA NAIR	Slot	: A2+TA2+TAA2
Time	: 90 Minutes	Class Nbr	: CH2022232300116 CH2022232300117 CH2022232300118 CH2022232300120 CH2022232300121 CH2022232300122
		Max. Marks	: 50

Answer ALL the questions

Q.No.	Sub. Sec.	Questions	Marks
1.		<p>Determine V_o and I_o in the circuit using mesh analysis in Fig.1</p> <p>Fig. 1</p>	10
2.		<p>Using the superposition theorem, determine $v_1(t)$ in the circuit in Fig.2.</p> <p>Fig. 2</p>	10

Find the Thevenin equivalent of the circuit in Fig.3, as seen from terminals a-b.

3.

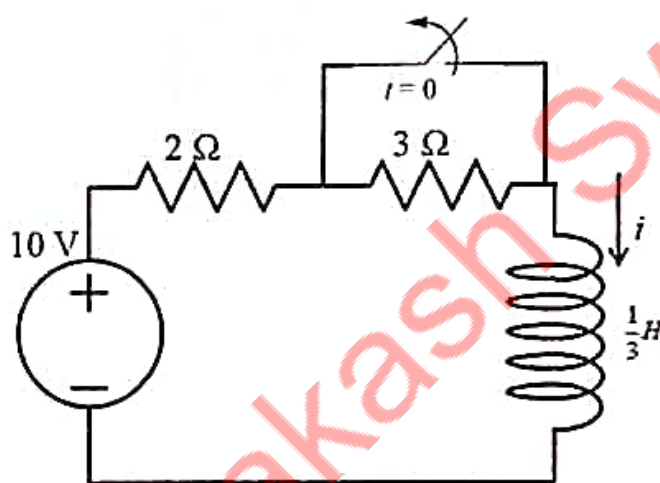


10

Fig. 3

Find $i(t)$ in the circuit shown in Fig. 4, for $t > 0$. Assume that the switch has been closed for a very long time.

4.

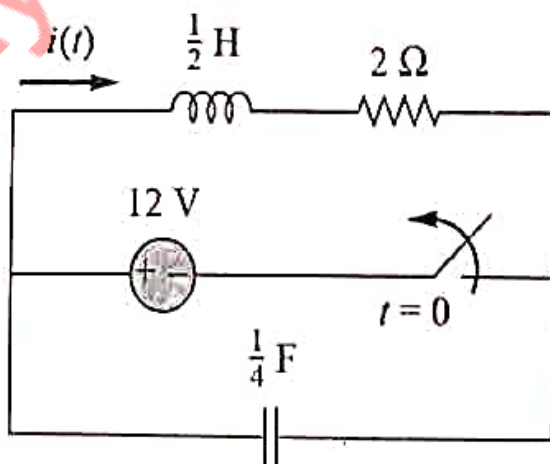


10

Fig. 4

The switch in the circuit of Fig. 5 has been closed for a long time but is opened at $t=0$. Determine $i(t)$ for $t > 0$.

5.



10

Fig. 5

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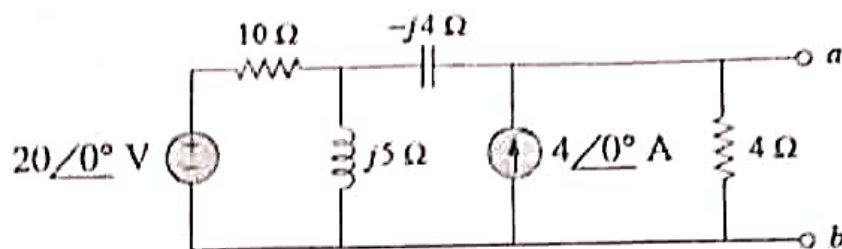


Fig. 3

Find $i(t)$ in the circuit shown in Fig. 4, for $t > 0$. Assume that the switch has been closed for a very long time.

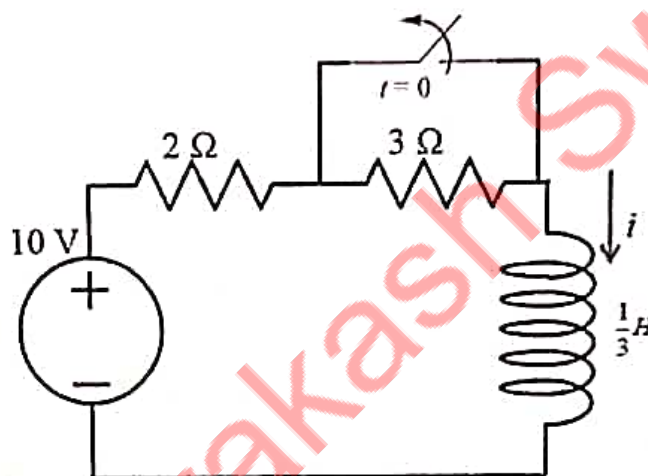


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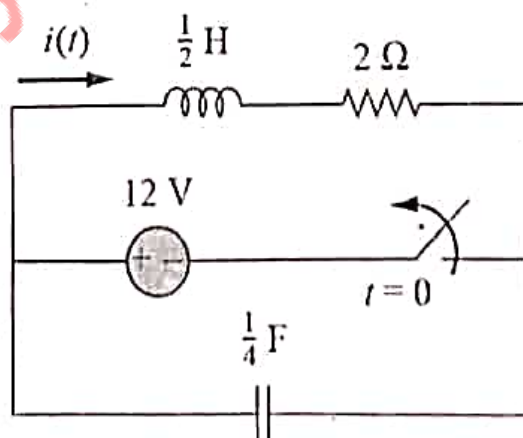


Fig. 5

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