

Enroll No

K.E.Society's  
**Rajarambapu Institute of Technology, Rajaramnagar**  
 (An Empowered Autonomous Institute, affiliated to SUK)  
**Unit Test -II ( 2025-26)**

Q.P. Code
UT3110

S.Y. B.Tech.- Electrical Engineering

Course Code: EE2034

Course Name: Electrical Circuit Analysis

Day & Date: 18-08-2025

Time: 03:45 to 04:45 PM

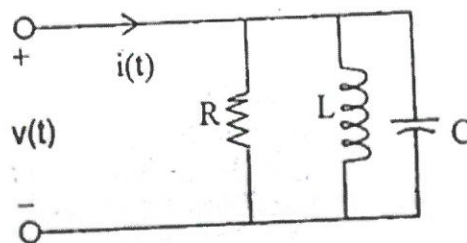
Max Marks- 25

- Instructions:**
- 1) All questions are compulsory.
  - 2) Figures in rounded ( ) brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
  - 3) CO is the index number of the Course Outcome statement.
  - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
  - 5) Assume suitable data if necessary.
  - 6) Use of non-programmable calculators is allowed

Marks	BT Level	COs
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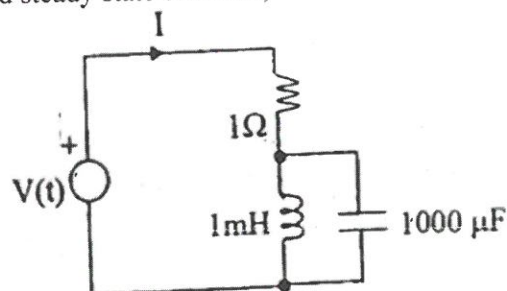
**Attempt all questions. Each question is compulsory.**

- Q.1 A For given circuit  $R=1/3$  ohm,  $L=1/4$  H,  $C=3$  F has input voltage  $v(t)=\sin 2t$ . The resulting current is, 6    3    1



OR

For given circuit find steady state current I,

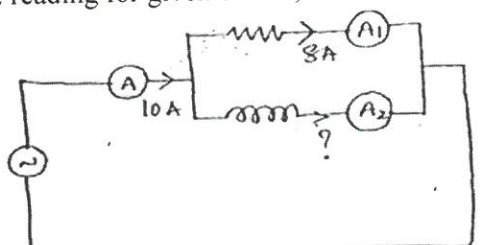


$$v(t) = 5\sqrt{2}e^{-5t} \cos(1000t) \text{ V}$$

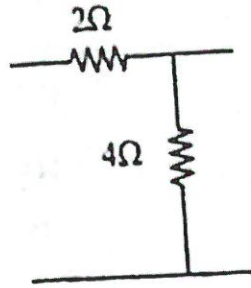
- B Explain series RLC and parallel RLC circuit behavior. [Diagram 1, Phasor Diagram 2, Voltage and current relations= 3 marks] 5    3    1
- C Find resonant frequency for series RLC or parallel RLC circuit, at  $R=3$  ohm,  $L=4$  H,  $C=3$ . 3    4    1

OR

Find ammeter A2 reading for given circuit, when  $A=10$  Amp and  $A_1=8$  Amp.



Q.2 A Determine Z or Y parameter for given circuit.



6 3 2

B Determine value of X for given circuit.  $X = Z_{11} + Y_{21} + \frac{H_{12}}{D}$   
(Note: Z, Y, H, D all are two port parameters).

