

VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE

Matunga, Mumbai – 400 019.

[AUTONOMOUS]

END Semester Examination

Sem & Programme:-

IV SEM(Electrical)

Duration:-

03 Hours

Course code & course: Network Analysis II

MAX. MARKS:- 100

Date of Exam:

16-7-11
2:30 pm to 5:30 pm

Instructions:

1. Attempt all five questions.
2. **Figures** to the right indicate **Full Marks**.
3. Assume suitable **additional data**, if required.
4. Illustrate your answer with neat sketches whenever necessary.

Q.No.		Marks
1	a) State & explain condition of Reciprocity & Symmetry of two port network. Derive the condition for Z-parameters.	10
	b) Find V_2/V_1 for the fig (1).	10
2	a) Obtain fourier series for the waveform in the fig (2).	10
	b) Obtain expression for v(t) in fig 3.	10
3	a) Using graphical method for obtaining residues find time domain response of function: $F(S) = -\frac{3(S+2)}{(S+1)(S+5)}$	10
	b) Find expression of i(t) for t>0 in the fig (4)	
4	a) Explain different interconnection of two,2 port network & show method of obtaining overall parameter in each case.	10
	b) Check following functions for PRF: 1) $F(S) = \frac{S^4+3S^3+2S^2+S+8}{S^3+S^2+S+1}$ 2) $F(S) = \frac{2S^2+2S+1}{S^3+2S^2+S+2}$	10
5	a) Realize the following LC function in Foster form I & II. $Z(S) = 78 \frac{S(S^2 + 2)(S^2 + 4)}{(S^2 + 1)(S^2 + 3)}$	10
	OR a) Realize the following R-Cfunction in Foster form I & II. $F(S) = \frac{S^3 + 9S^2 + 23S + 15}{s(S^3 + 12S^2 + 44S + 48)}$	
	b) Determine laplace transform for the waveform by using sum of step functions in fig. 5	10
	OR b) Obtain state variable representation for circuit in fig.6	

(P.T.O)

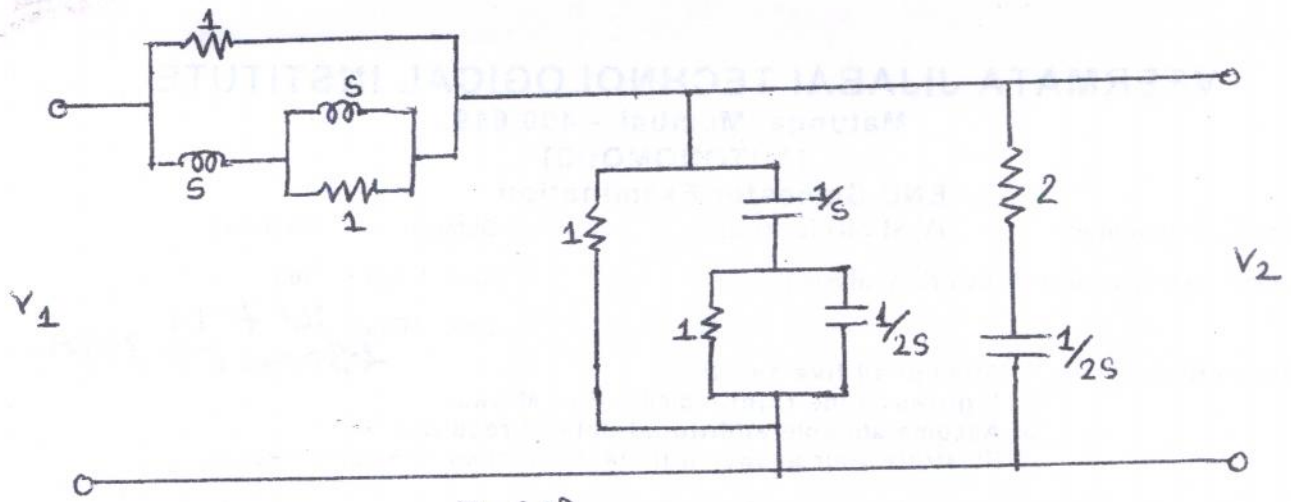


Fig (1)

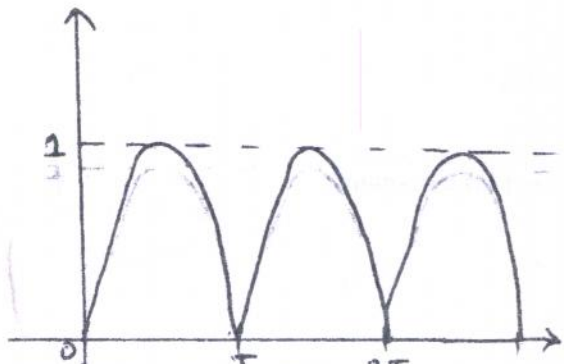


Fig (2)

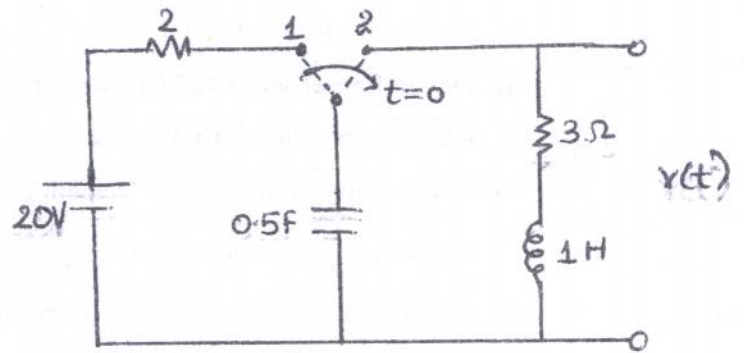


Fig (3)

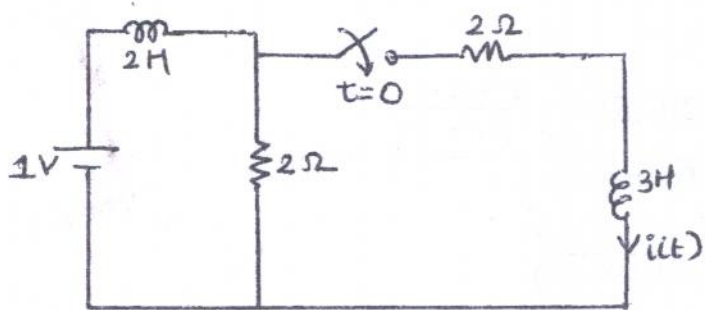


Fig (4)

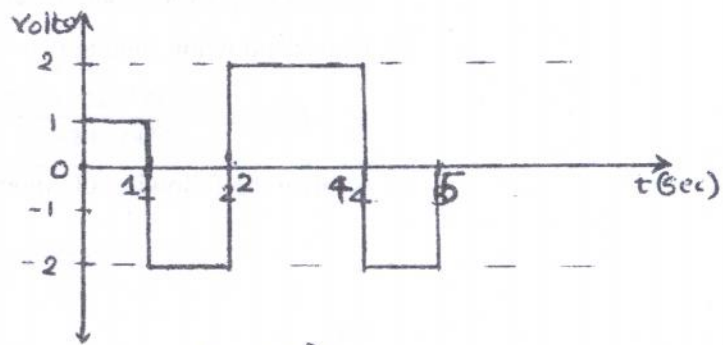


Fig (5)

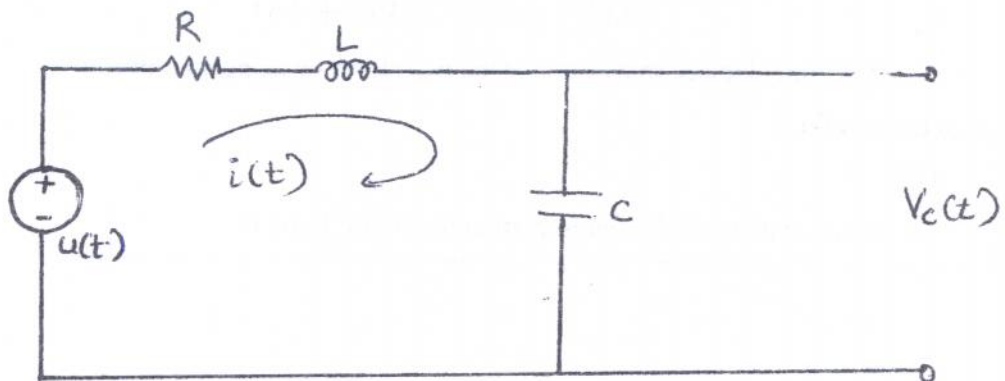


Fig (6)