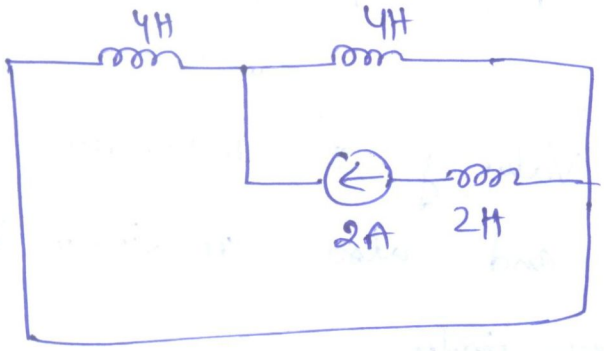
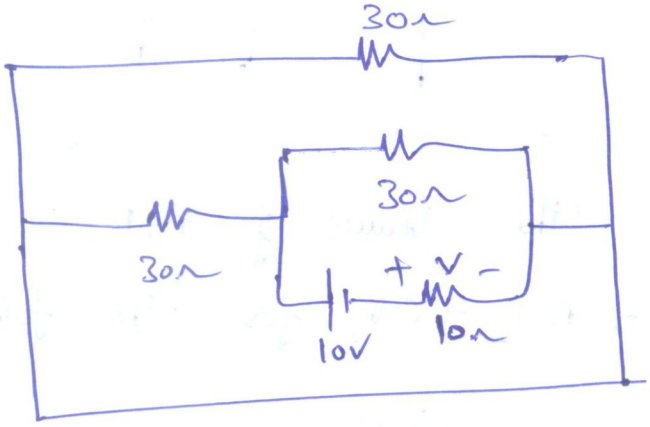
NETWORK THEORY
QUIZ

1. In the circuit given below, the flux linkages of the 2 H inductor is ——

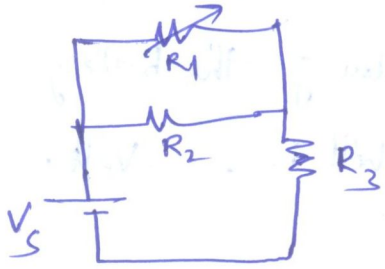


2. The value of 'V' from the given below circuit is —— Volts.

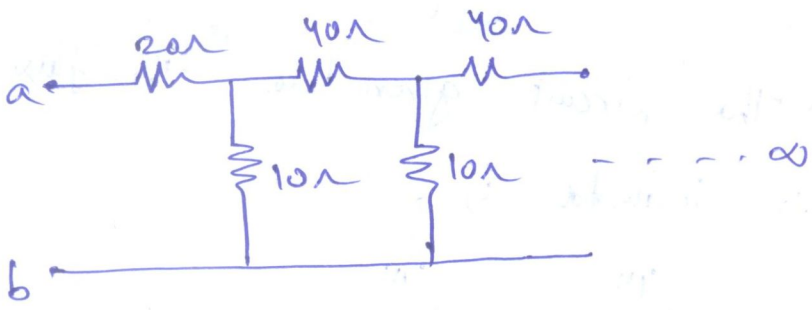


3. power dissipated in a bulb of 60W/230V. If we apply 200V across it is —— watts.

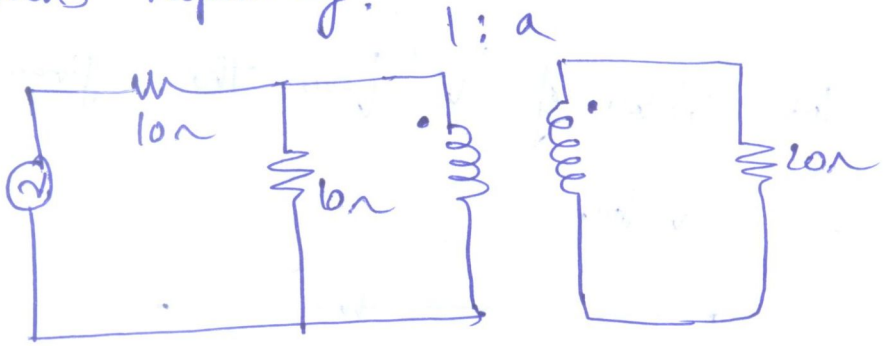
4. for what value of R_1, maximum power dissipation in R_2



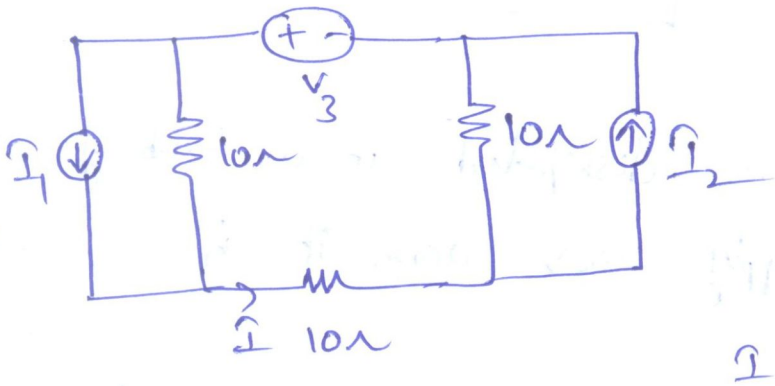
5. find equivalent resistance across terminal ab



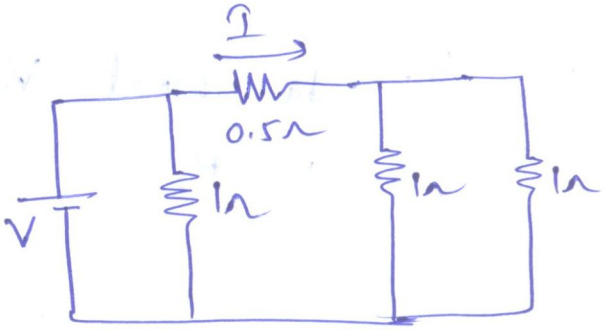
6. for what value of 'a' maximum power transfered to 20Ω and also maximum value of power in watts respectively.



7. Estimate the values of A; B, C . . If $\hat{I}$ is defined as $A\hat{I}_1 + B\hat{I}_2 + CV_3$ for the following Circuit.

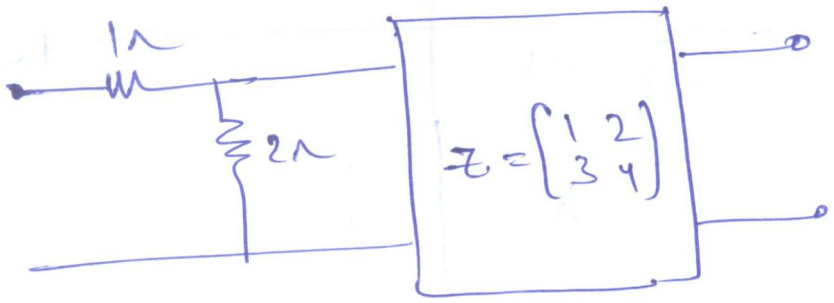


8. In the Circuit, if $\hat{I} = 2A$, then the value of the battery Voltage V will be ___ Volt.

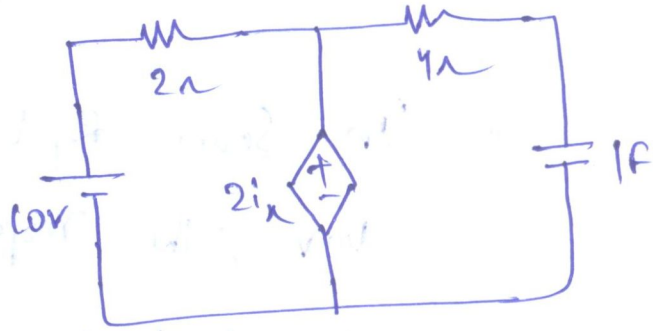


9. If $i(t) = 4 + 3\cos(10t - 30^\circ) + 4\sin(10t + 30^\circ)$ is passing through resistor of 10Ω. power dissipated in 10Ω is ____ watts.

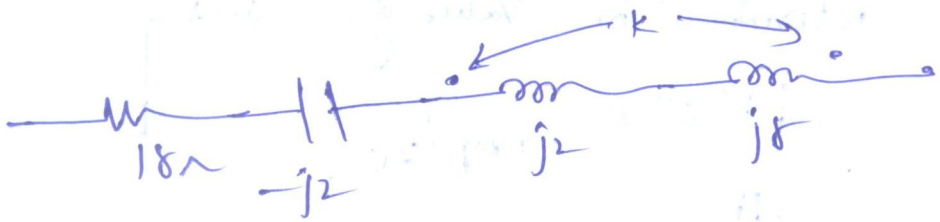
10. Consider the below Circuit, determine Z_{12} of Complete two port network



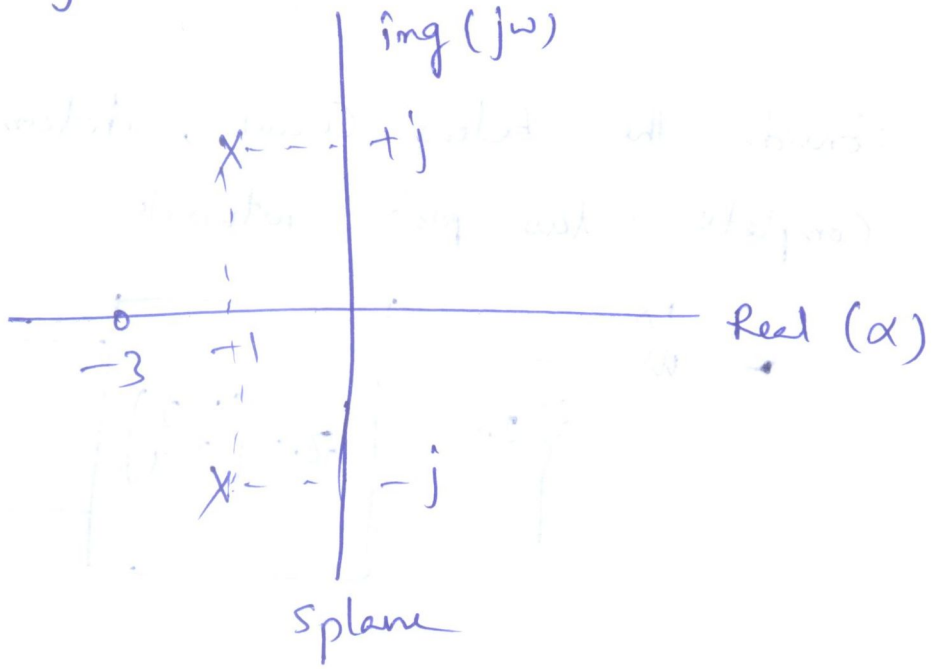
11. Consider below Circuit, time Constant (T) of the Circuit is ____ sec.



12. for ____ Value of 'k' the Circuit is under magnet resonance? (k = Coefficient of Coupling)

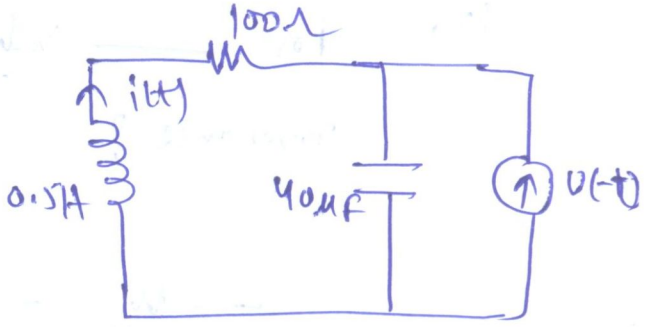


13. The driving point impedance $Z(s)$ of a network has the pole zero locations as shown in fig. $Z(j0) = 3$, then $Z(s)$ is ——.

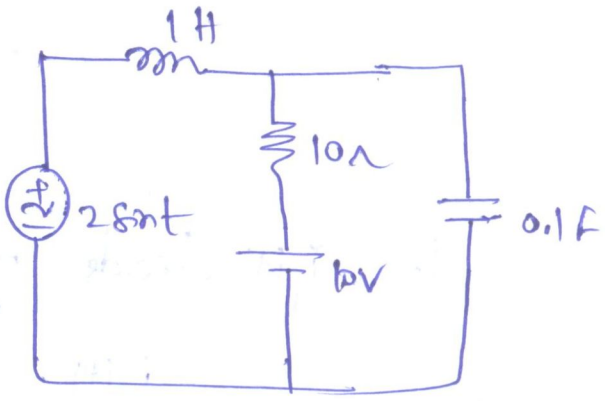


14. In Series R, L, C Grait with applied Voltage of 10V, the response $i(t) = 3e^{-2t} - 3e^{-4t}$ then Values of R, L, C are ——, ——, ——.

15. Consider the figure, determine the Value of $\frac{di(0^+)}{dt}$ Amp/sec.

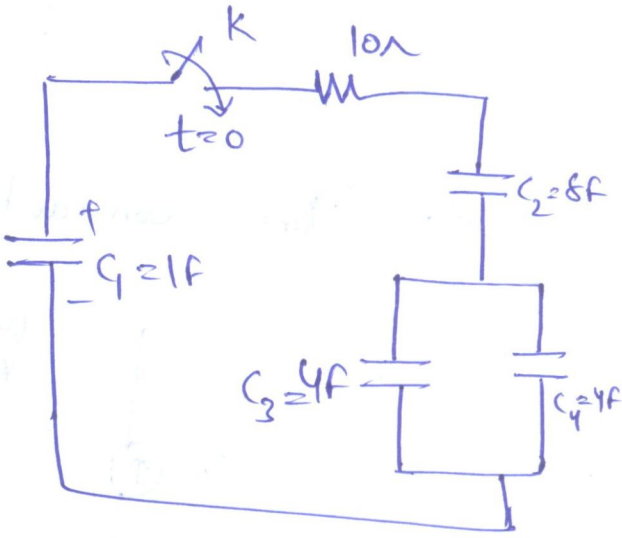


5. power Supplied by 10V source is ____ Watts.



4. Consider below figure, the value of 'V' by using data provided in figure-1 is ____ volts.

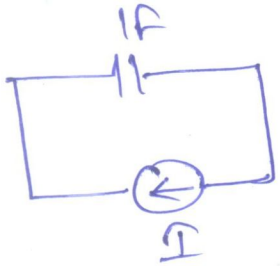
5. The steady state energy stored in C_2 is ____ joules (initial voltage across C_4 is 10V)



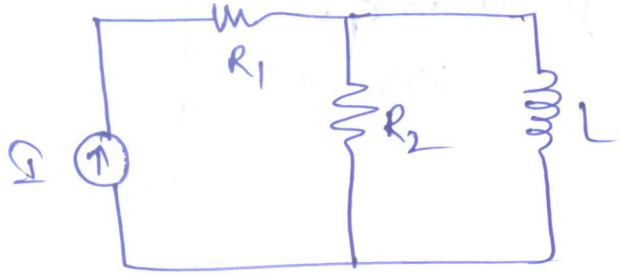
NETWORK THEORY

ASSIGNMENT.

1. If current flowing through the capacitor is $V(t+2) - V(t-2)$ then charge in capacitor at $t=0^+$ and energy in capacitor at $t=4$ sec respectively.



2. Time constant of the circuit is _____



3. Identify the location of dots as shown in below figure