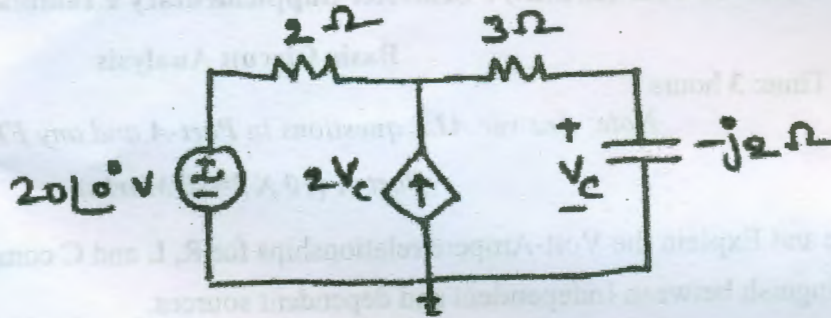


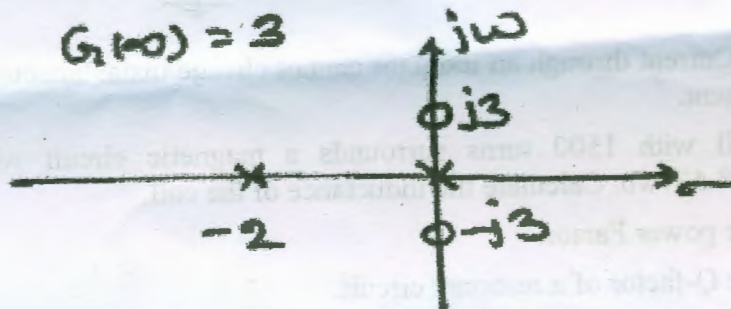
13. a) Determine Average power supplied by dependent source in the circuit. [5]



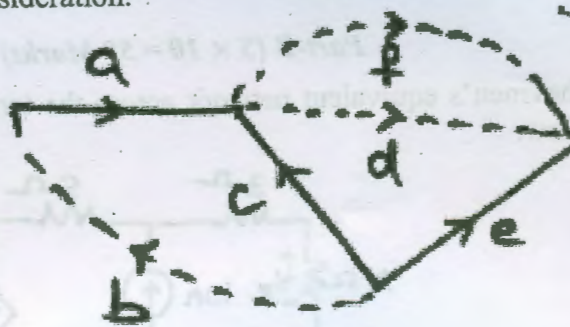
b) Find complex voltage across series combination of a 500 Ω resistor and a 900 mH inductor if complex current $8e^{j3000t}$ mA flows through two elements in series. [5]

14. a) Derive an expression to prove that Resonant frequency is equal to geometric mean of two half power frequencies in a series resonant circuit. [6]

b) Obtain transfer Function $G(s)$ from the pole zero plot. [4]



15. a) Obtain Fundamental Tie-Set matrix of the network graph shown below taking tree branches a,c,e into consideration. [5]



b) Obtain dual of the network shown below. [5]

