**E.G.S.Pillay Engineering College, Nagapattinam**

**Department of Electrical and Electronics Engineering**

**Assignment No – I**

**Sub Code & Name : GE 6252–Basic Electrical & Electronics Engg. Max.Marks:50**

**Year & Sem : I / II Sem Date :**

**Name of the Staff : V.MOHAN / K.NANDAKUMAR/ S.SIVAMANI**

**1) i) In the Circuit of Figure, find using “Kirchoff’s Laws” the currents in the various elements. Find also the power delivered by the battery. (5)**

 **ii) In the Circuit of Figure, find the power supplied to the load. Also find the voltage at the load. (5)**

**2) i) Solve the mesh and branch currents shown in the Figure. (5)**

 **ii) Determine the Power dissipation in the 4Ω resistor of the circuit shown in Figure. (5)**

**3) i) Use mesh analysis to determine the three mesh currents in the circuit. (5)**

 **ii) Find V1, V2, V3 by the nodal method for the given circuit. (5)**

**4) i) Find the voltages of the nodes 1 and 2 in the**  **network**

 **shown in figure. (5)**

 **ii) In the circuit given in figure, obtain the load current and power delivered to the load. (5)**

**5) i) In a series R.L.C. circuit, R = 24Ω, L=191 mH and C = 66.3μF given that the supply voltage is 240 V 60 Hz, find (i) Equivalent impedance (ii) Power factor (iii) Current (iv) Power and (v) Reactive Power. (5)**

 **ii) A series R – L circuit has R = 20 Ω and L = 0.05H and is connected to 250 volts 50 cycle source. Calculate (a) the impedance (b) current (c).Power factor. Draw the Phasor diagram. (5)**