Mr Munish

JAYPEE UNIVERSITY OF INFORMATRION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION, September-2016
B.Tech 1st Semester (ECE,CSE, IT & CE)

COURSE CODE: 10B11EC111 MAX. MARKS: 15
COURSE NAME: Electrical Circuit Analysis
COURSE CREDITS: 04 MAX. TIME: 1 HR

Note: *All questions are compulsory; Carrying of mobile phone during examination will be treated as case of unfair means.*

Q1. Find the condition when the circuit current is maximum in the circuit given in figure 1. **[2.5]**

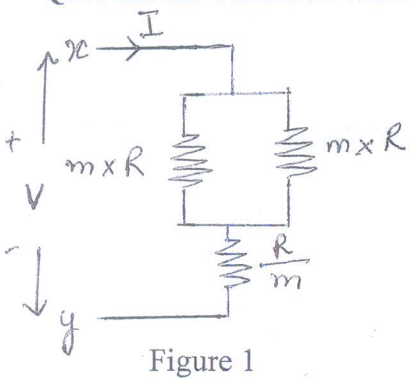

Figure 1

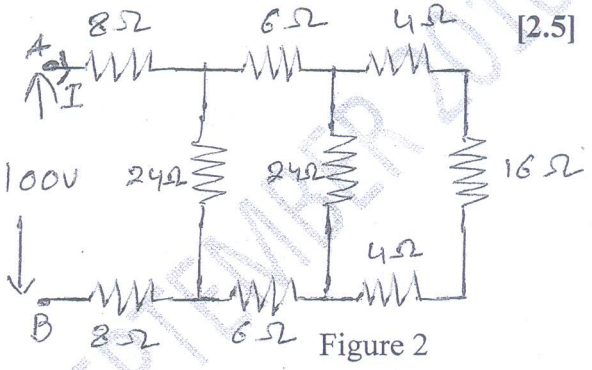

Figure 2

Q2. a) In the circuit shown in figure 2 determine a) the total current and b) the power delivered to the 16Ω resistance. **[1.5+1.5]**

b) Determine the voltage drop across 10Ω resistance in the circuit as shown in figure 3. **[2.5]**

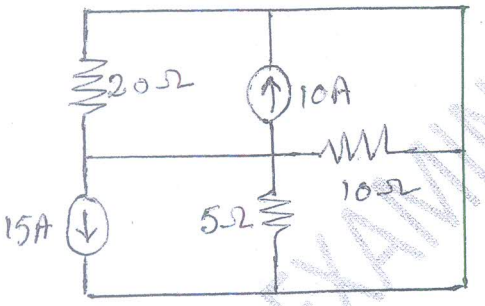

Figure 3

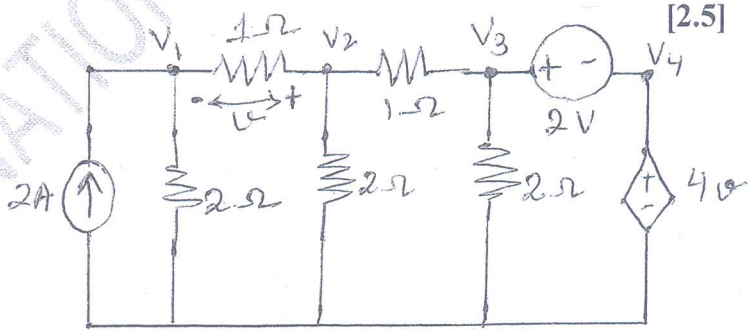

Figure 4

Q3 a) In the network shown in figure 4, find the voltages V_1, V_2, V_3 and V_4 using nodal analysis. **[4]**

b) Using mesh analysis, find the currents I_1, I_2 and I_3 in figure 5. **[3]**

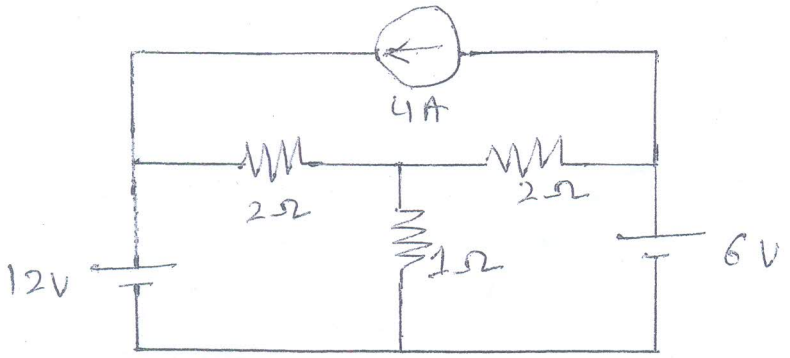

Figure5