

**J.C. Bose University of Science and technology, YMCA, Faridabad**  
**B. Tech 1<sup>st</sup> semester Mechanical Engineering (M12)**  
**Sessional 1<sup>st</sup> (Basics of Electrical Technology)**

**Max. Time 90 minutes**

**Max. Marks 15**

**Note: - Attempt any three. All question carry equal marks.**

Q1. State and explain the maximum power transfer theorem with suitable example.

Q2. Using Nodal analysis method, find the each branch current in figure 1.

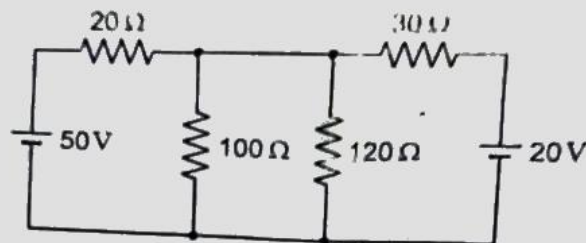


Figure.1.

Q3. Find the current in  $6\Omega$  resistor in circuit given below in figure2 using Norton theorem.

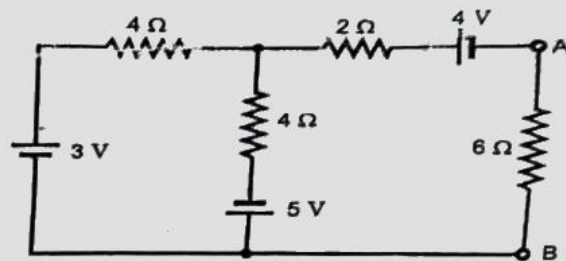


Figure2.

Q4. Find the current in  $6\Omega$  resistor using superposition theorem in figure3 given below.

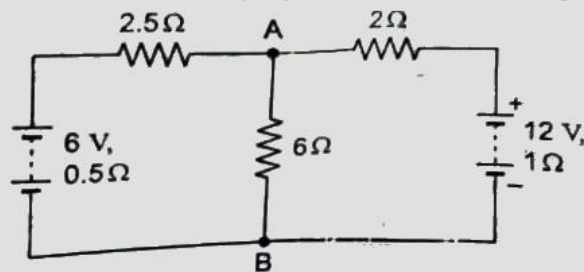


Figure 3