JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MID TERM (SUMMER SEMESTER EXAMINATION)- June-2018

B.Tech.

COURSE CODE: 10B11EC111   MAX. MARKS: 50

COURSE NAME: ELECTRICAL CIRCUIT ANALYSIS

COURSE CREDITS: 04   MAX. TIME: 2 Hrs

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

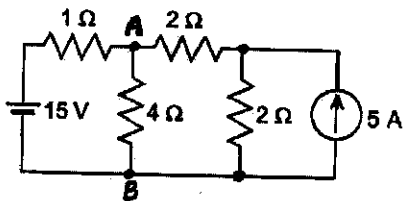1. Find the current through 4-Ω resistor in the circuit shown in Fig. 1, using superposition theorem.
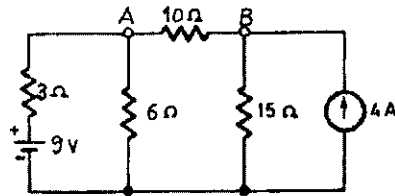

Fig 1   **Fig 2**

2. Find the current I in 10-Ω resistor in the circuit shown in Fig 2, using Thevenin's theorem.

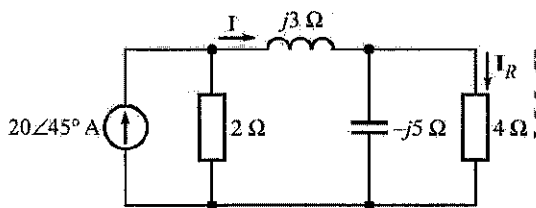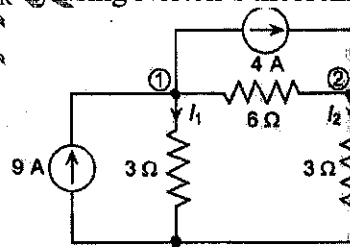3. In the circuit shown in Fig. 3, find the current I_R by using Norton's theorem.

Fig 3   **Fig 4**

4. a) By applying nodal analysis to the circuit in Fig. 4, determine the currents I_1 and I_2.

   b) Use KCL, KVL and Ohm's law to find v_2, v_3, i, R_1 and R_3, in the circuit of Fig. 5.

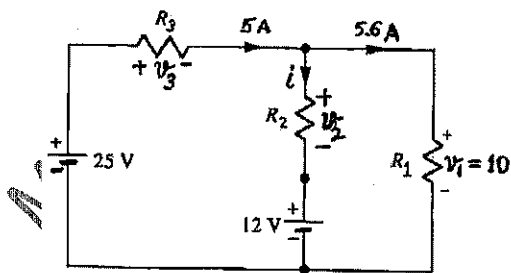**Fig 5**   **Fig 6**
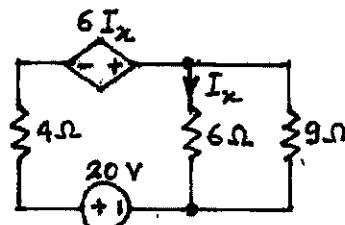
5. Find the current in the 9-Ω resistor of the circuit shown in Fig. 6, using Thevenin's theorem.