B.E. All Branches First Semester (C.B.S.) / B.E. (Fire Engineering) First Semester

Basic Electrical Engineering

P. Pages : 2 **NRT/KS/19/3284/3933**

Time : Two Hours Max. Marks : 40

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Due credit will be given to neatness and adequate dimensions.
7. Assume suitable data whenever necessary.
8. Use of non programmable calculator is permitted.

1. a) Explain ideal voltage source and practical voltage source. **4**

b) Determine the Equivalent resistance between terminals A and B in the network shown in figure. All resistances are in ohms. **6**

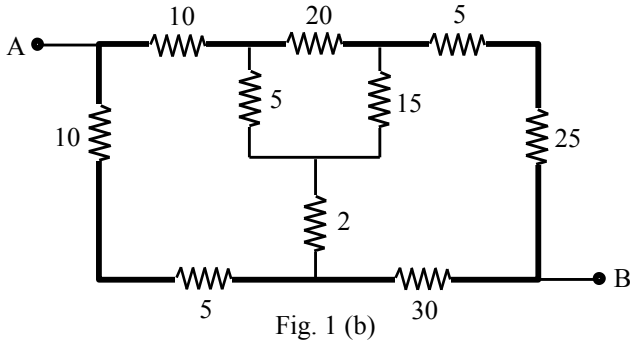

Fig. 1 (b)

OR

2. a) State and Explain Kirchoff's laws for DC electric circuit. **4**

b) Find the current through branch AB using super position theorem. **6**

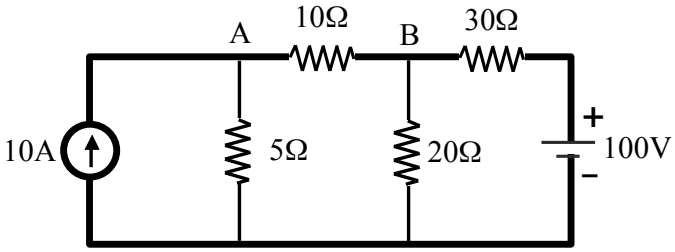

Fig. 2 (b)

3. a) Define the following terms related to magnetic circuit. **4**

i) Flux density ii) Reluctance

iii) Permeance iv) MMF