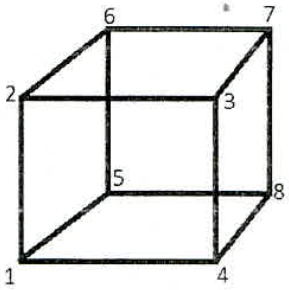
SCHOOL OF ELECTRICAL ENGINEERING, KIIT UNIVERSITY
MID-SEMESTER EXAMINATION,2016
SEMESTER: 1ST ; BRANCH: ALL
SUBJECT: BASIC ELECTRICAL ENGINEERING, (CODE: EE1003)
Maximum Marks: 25 **Time Allowed : 2 Hrs.**

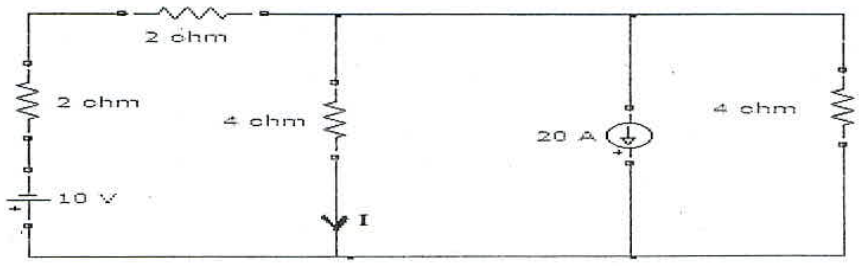
Instructions: Answer any five questions including Q. No. 1. The figures in right hand margin indicate full marks. Candidates are required to give answers of all parts of a question at one place only in their own words.

Q.1
a) The current through a wire depends on time I = (2 +3t)A. Calculate the charge crossed through a cross section of the wire in first 10 second. [1
b) Why bulb of lesser wattage in series combination will shine more? [1
c) What is the purpose of using fuse in an electrical installation? [1
d) State Norton's Theorem. [1
e) If an ideal voltage source and an ideal current source are connected in parallel, then the combination has exactly the same properties as a voltage source alone. Justify it. [1

Q2. Find the resistance of the wire frame shaped as a cube when measured between the points 1 and 4. The resistance of each edge is R ohm. [5



Q3 [5

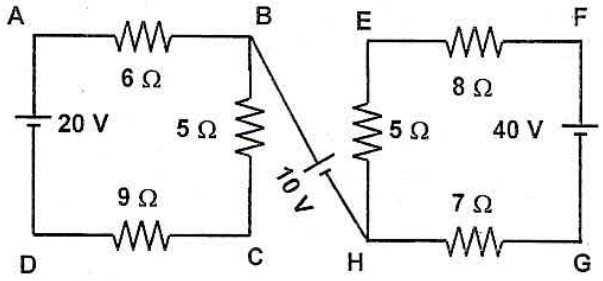


[PTO]

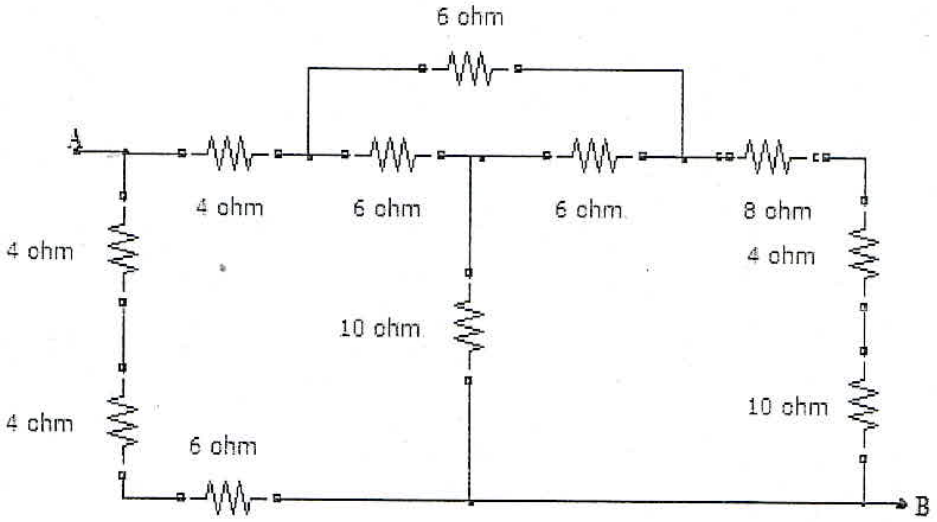
Find **I** by using superposition theorem.

Q4 a) Resistances R, 2R, 4R, 8R....infinity are connected in parallel. What is the equivalent resistance? [2

b) For the circuit shown as below, find V_{CE} and V_{AG}. [3



Q5 Using star/delta transformations for the given circuit, find the equivalent resistance between terminals AB. [5



Q6. a) Explain various types of wiring circuits and describe different methods of house wiring. [2

b) With neat sketch show the general layout of a power system and explain each component of the system. [3

**********THE END**********