Reg. No.								

B.E. / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, Nov/Dec 2012

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SECOND SEMESTER – (REGULATIONS 2008)

EE 9166 – BASIC ELECTRICAL ENGINEERING AND MEASUREMENTS

Common To Mechanical (Tamil & English Medium), Material Science, Mining, Manufacturing And Printing

Time: 3 hours **Max. Marks: 100**

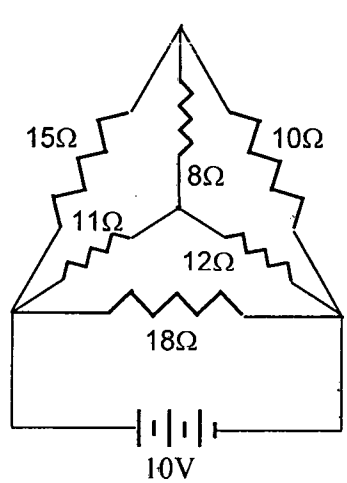
Answer All Questions

Part - A (10 × 2 = 20 Marks)

1. Define ohm's law with illustration.
2. Define peak factor and form factor?
3. What is the working principle of a dc motor?
4. Why single-phase induction motor is not self-starting and how it is made as a self-starting one?
5. What are the essential torque requirements in an instrument?
6. What is megger and what is the purpose of it?
7. Define active and passive transducers.
8. What is the purpose of a pH sensor?
9. Compare LCD and LED.
10. What is D/A converter?

Part - B (5 × 16 = 80 Marks)

11. Find the current drawn from a battery of 10V connected to the circuit shown below.



12(a). Explain the construction and working principle of dc motor.

(Or)

12(b). Describe the construction of a transformer and derive the emf equation.

13(a). Explain the working principle and construction of attraction type and repulsion type of moving iron instruments.

(Or)

13(b). Explain the working principle and construction of an Induction type watt-hour meter with a neat diagram.

14(a). With a neat diagram explain the working of a linear variable differential transformer (LVDT) and Resistance thermometer.

(Or)

14(b). Explain the working and function of a viscosity and moisture sensor.

15(a). Describe the Analog -to- Digital converter.

(Or)

15(b). With a neat diagram explain construction and various parts of Cathode ray tube.