

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

B.Tech. (Sem. - 1st/2nd)

BASIC ELECTRICAL & ELECTRONICS ENGINEERING

SUBJECT CODE : EE - 101 (2K4 & Onwards)Paper ID : [A0117]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

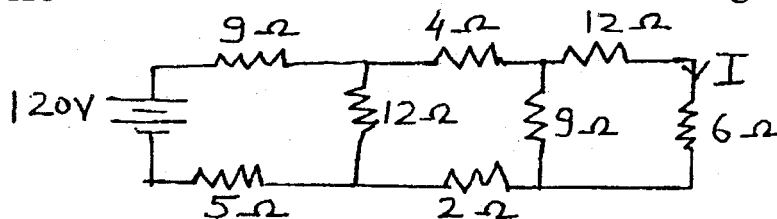
Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Five** questions from Section - B & C.
- 3) Select atleast **Two** questions from Section - B & C.

Section - A**Q1)****(Marks : 2 Each)**

- a) Define Temp. coefficient of resistance & give its units.
- b) Define R.M.S. value of A.C.
- c) Give the relation between phase & line values of voltage & current for star connection.
- d) What is the working principle of D.C. motor.
- e) Give the working principle of moving iron instruments.
- f) Draw the static characteristics of thyristor.
- g) Convert 101011 into decimal system & octal system.
- h) Write the working principle of Thermistor & Thermocouple.
- i) State Faraday's laws of electromagnetic induction.
- j) Draw the symbolic representation of BJT and FET.

Section - B**(Marks : 8 Each)****Q2)** State KCL and KVL. Find the current I in the following circuit using KVL.

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- Q3)** Draw & explain the phasor diagram of RLC series circuit and give the condition for resonance in this circuit.
- Q4)** Explain the working principle & construction of three phase induction motor.
- Q5)** Explain the construction & working of induction type energy meter.

Section - C

(Marks : 8 Each)

- Q6)** What is LVDT. Explain its use for the measurement of displacement.
- Q7)** What is Zener Diode. Explain its use as voltage regulator.
- Q8)** Draw & explain the PIN diagram of IC 7400.
- Q9)** Draw the equivalent circuit & truth table of RS Flip-Flop.
