PROD/IV/CBGS/EEE / Electrical & Electronics Engg.

15-12-16

Q.P. Code : 559703

(3 Hours) Total Marks : 80

Note : 1) Question **No. 1** is **compulsory.**
2) Attempt **any three** questions out of remaining **five** questions.
3) **Figures** to the **right** indicate **full marks.**

1. Attempt the followings. **20**
   a) What is the necessity of starter for D.C.Motor.
   b) Why Single phase Induction Motor is not self starting? How it is self started?
   c) Explain the various logic gates.
   d) Explain electrical welding.

2. (a) Discuss the constructional details and working principle of D.C.Motor. **10**
   (b) Explain the working of Stepper motor and discuss its industrial applications. **10**

3. (a) Draw and explain the Torque-Slip and Torque-speed characteristics of 3-∅ I.M **10**
   (b) Derive the Torque equation for 3-∅ I.M. and what is maximum torque? **10**

4. (a) Explain the methods to calculate Efficiency and regulation of transformer. **10**
   (b) Discuss 'Transmission and distribution of electric power'. **10**

5. (a) Explain the block diagram and pin configuration of OP -AMP and Explain its ideal characteristics . **10**
   (b) Explain the application of SCR for speed control of AC Motors . **10**

6. Write a short notes on (**any four**) **20**
   1) Industrial timers and relays.
   2) Industrial applications of A C Commutator motors.
   3) V-I characteristics of SCR.
   4) Block diagram of microprocessor 8085.
   5) Multiplexers, de-multiplexers
