

Sem-IV / Prod (EEE) CBGS / 31.05.16

Electrical & Electronics Engg.
Q.P. Code : 559701

(3 Hours)

[Total Marks : 80

- N.B. :** 1) Question no. 1 is compulsory.
2) Attempt any three from Q.2 to Q.6 .
3) Illustrate your answer with neat sketches.

- | | |
|---|-----------|
| 1. Attempt any four of the following : | 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 resistance welding, process control using SCR. | |
| e) Explain the programmable Logic controller. | |
| 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- ϕ I.M. | 10 |
| (b) Explain different speed control techniques of DC motor. | 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 | |