Q.P. Code : 24653

[Time: 03 Hours]   [Marks:80]

Please check whether you have got the right question paper.

N.B: 1. Question.No.1 is compulsory.
        2. Attempt any 03 Questions out of remaining 05 Questions.
        3. Fig. to right indicates full marks.

Q.1   Attempt the following: 20
   a) What is the necessity of starter for DC Motor?
   b) Why single phase induction motor is not self-starting? How it is self-started.
   c) Explain various logic gates.
   d) Explain electrical welding.

Q.2 a) Discuss the electrical and electronic speed control methods of DC shunt motor?   10
    b) Explain the working of stepper motor and discuss its industrial application.   10

Q.3 a) Derive the Torque equation for 3 phase I.M. Relate motor torque with slip and draw the Torque slip and   10
        Torque – speed characteristics of 3 phase I.M.
    b) Explain the electromechanical energy conversion and state various losses at energy stage of electro-   10
        mechanical energy conversion of 3 phase I.M?

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

Q.5 a) Explain the block diagram and pin configuration of OPAMP and explain its ideal characteristics.   10
    b) Explain the application of SCR for speed control of AC motors.   10

Q.6   Write short notes on (Any 4)   20
   a) Industrial timers and relays.
   b) Industrial application of AC commutator motors.
   c) VI characteristics of SCR.
   d) Block diagram of Microprocessor 8085.
   e) Multiplexers and Demultiplexer.

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