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Reg. No. :

Name :

V Semester B.Tech. Degree Examination, June 2009
(2003 Scheme)
03-505 : APPLIED INDUSTRIAL ELECTRONICS (U)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

(10×4=40 Marks)

- I. a) Convert the following into BCD code
- i) $(A9CB)_{16}$ ii) $(10101101)_2$
- b) Draw the circuit of a D latch and its truth table.
- c) State and prove De Morgan's law.
- d) List the advantages of Assembly Language program.
- e) Explain timing and control unit in 8085.
- f) What are the modes of 8255 IC ?
- g) Explain Fetch and execute operation.
- h) Explain forward voltage triggering thyristor turn ON method.
- i) Explain reverse blocking mode of operation of thyristor.
- j) Draw forward gate characteristics of thyristor.

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PART – B

Answer **one** question from **each** Module.

Module – I

- II. a) Design a ripple counter to count 0 – 15.
b) Explain Decoder and Encoder with necessary diagrams. (2×10=20 Marks)

OR

- III. a) With necessary diagram, explain parity generator and its applications.
b) Distinguish between RAM and ROM. (2×10=20 Marks)

Module – II

- IV. a) Briefly explain 8251 – USART with schematic diagram.
b) Explain briefly various addressing modes used in Intel 8085. (2×10=20 Marks)

OR

- V. a) Draw and explain the architecture of 8085 microprocessor.
b) Explain how you will interface 16 bit ADC with 8 bit CPU. (2×10=20 Marks)

Module – III

- VI. a) Explain and state V – I characteristics of SCR.
b) Describe the working of single phase Half wave Rectifier circuit with RL load, with neat diagram. (2×10=20 Marks)

OR

- VII. a) Explain with neat block schematics a microprocessor based temperature control system.
b) Explain briefly thyristor controlled drives for motors. (2×10=20 Marks)
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