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Reg. No. :

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Question Paper Code : 91450

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Sixth Semester

Electrical and Electronics Engineering

EE 2354/EC 2312/EE 64/10133 EC 506/10133 EE 503 — MICROPROCESSORS
AND MICROCONTROLLERS

(Common to Fifth Semester Electronics and Instrumentation Engineering/
Instrumentation and Control Engineering)

(Regulation 2008/2010)

(Common to PTEE 2354/PTEC 2312/10133 EE 503 — Microprocessors and
Microcontroller for B.E. (Part-Time) Fourth Semester — Electrical and
Electronics Engineering)

(Regulation 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the function of keyboard interrupts.
2. List the 8085 flags.
3. List any two data manipulation instructions.
4. What is meant by lookup table?
5. What are the function of USART?
6. List out the operating modes in 8253 Timer/Counter.
7. Mention the registers used for serial communication in 8051 micro controller.
8. What are the addressing modes followed in 8051 Micro controller.
9. What are the I/O instructions used in 8051?
10. State the principle of microcontroller based stepper motor control system.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the architecture of 8086 Microprocessor. (16)

Or

(b) (i) Explain the function of 8085 signals. (8)

(ii) Draw and explain the timing diagram of memory write operation. (8)

12. (a) Write an Assembly language program for

(i) Adding a set of n numbers

(ii) To generate Fibonacci series using subroutines. (8 + 8)

Or

(b) Explain the types of addressing modes in 8085 processor, with suitable examples. (16)

13. (a) Explain about 8279 keyboard display controller in detail. (16)

Or

(b) Explain A/D converter interfacing in detail. (16)

14. (a) Explain the functional block diagram of 8051 micro controller. (16)

Or

(b) Explain Timing Diagram interrupt structure of 8051 in detail. (16)

15. (a) Explain the closed loop control of servo motor in detail. (16)

Or

(b) Explain about Washing Machine Control using Microcontroller programming. (16)