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Question Paper Code : 31406

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Sixth Semester

Electrical and Electronics Engineering

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

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

(Regulation 2008/2010)

(Common to PTEE 2354/PTEC 2312 – Microprocessors and Microcontroller for B.E.
(Part-Time) Fourth Semester – Electrical and Electronics Engineering and
Electronics and Instrumentation Engineering – Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the various flags used in 8085?
2. What is ALE?
3. What are the different addressing modes of 8085?
4. What are the instructions associated with a subroutine?
5. What is the need for 8259 PIC?
6. What are the basic modes of operations of 8255?
7. What is instruction pipelining?
8. What is the purpose of overflow flag in 8051 microcontroller?
9. Mention the interrupts of 8051 microcontroller.
10. LED is connected to pin P0.7, write an assembly program to toggle the LED forever.

PART B — (5 × 16 = 80 marks)

11. (a) Draw and explain the architecture of 8085. (16)

Or

- (b) Explain the interrupt structure of 8085 microprocessor. (16)
12. (a) Discuss in detail about the 8085 Instruction set, explaining about the various types of operations. (16)

Or

- (b) Write an assembly language program with its output to add two 16 bit numbers using 8085. (16)
13. (a) Explain the 8255 PPI architecture with different modes by neat sketch. (16)

Or

- (b) With neat diagram, explain the architecture and features of 8279 keyboard/display controller. (16)
14. (a) Discuss about the Timers in 8051 with suitable examples. (16)

Or

- (b) Discuss the addressing modes of 8051 microcontroller with suitable examples. (16)
15. (a) Write an 8051 C program that continuously gets a single bit of data from P1.7 and sends it to P1.0, while simultaneously creating a square wave of 200 us period on pin P2.5. Use timer 0 to create the square wave. Assume that XTAL = 11.0592 MHz. (16)

Or

- (b) A switch is connected to pin P2.7. Write a ALP to monitor the status of SW and perform the following.
- (i) If SW = 0, the stepper motor moves clockwise
- (ii) If SW = 1, the stepper motor moves counter clockwise. (16)