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B.E. / B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

ELECTRONICS AND COMMUNICATION ENGINEERING

Fifth Semester

EC372 - MICROPROCESSOR AND ITS APPLICATIONS.

(Regulations :2004)

Duration: 3 Hrs.

Maximum Marks: 100

Answer All Questions

Part A

10 X 2 = 20 Marks.

1. Mention the flags available in 8085 microprocessor.
2. What is the function of DAA instruction available in 8085?
3. What is the role of EU and BIU available in 8086 microprocessor?
4. What is nested looping?
5. How many register banks are available in 8051 microcontroller and how to select it?
6. With example explain the DIV instruction available in 8051.
7. What is the function of the IC 8257?
8. What is key debouncing?
9. What is a high power device how will you interface with microcontroller?
10. How will you interface analog system with microcontroller?

Part B

5 X 16 = 80 Marks.

11. (i). With a neat diagram explain the architecture of 8086. (8 Marks).
- (ii). Briefly explain the addressing modes available in 8086 microprocessor. (8 Marks).

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- 12.(a).(i). Write a program in 8085 for finding the average of two given numbers. (8 Marks).
(ii). With a neat diagram explain the interrupts available in 8085. (8 Marks).

(OR)

- 12.(b). Draw the timing diagram for the 8085 instruction STA 8256. The content of Program Counter is 8233. Assume other relevant details. (16 Marks).

- 13.(a). With a neat diagram explain the architecture of 8051 microcontroller. (16 Marks).

(OR)

- 13.(b). Explain Timer / Counter Programming in 8051. Write a program in 8051 to create a square wave of 1 KHz frequency. Assume the crystal frequency is 10 MHz. (16 Marks).

- 14.(a).(i) With the neat block diagram explain the function of the IC 8259. (8 Marks).

- (ii). With the neat block diagram explain the function of the IC 8251. (8 Marks).
(16 Marks).

(OR)

- 14.(b). With a neat diagram explain the ADC and DAC interfacing with microprocessor. (16 Marks).

- 15.(a).(i). Explain optical motor shaft Encoder. (8 Marks).

- 15.(a).(ii). What is a liquid crystal display? How will you interface it with a microcontroller? (8 Marks).

(OR)

- 15.(b).(i). Briefly explain the microcomputer based industrial process control. (8 Marks).

- (ii). With a neat diagram explain microcomputer based smart scale. (8 Marks).
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