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6E3205	Roll No. _____	Total No of Pages: 3
	6E3205 B. Tech VI Sem. (Main & Back) Exam. May. 2013 Computer Engg. 6CS5 Embedded System Design	

Time: 3 Hours

Maximum Marks: 80
Min. Passing Marks: 24

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.

Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination.

1. _____ 2. _____

UNIT - I

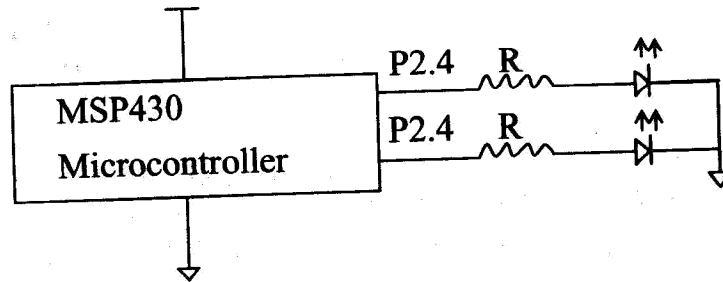
- Q.1 (a) What is embedded system? Explain what features should be in an embedded system. [8]
- (b) Why system designing is easy using embedded system? [8]

OR

- (a) Explain system- on- chip (SOC) in embedded system. [8]
- (b) What do you understand by hardware and software development environment in embedded system? [8]

UNIT - II

- Q.2 (a) What is RISC architecture? What features of MSP 430 make it to RISC? [8]
- (b) Write a 'C' program for MSP 430 to ON the LED'S connected at P2.4 and P2.3. [8]



OR

- (a) What is I/O interfacing? Explain seven segment and stepper motor interfacing with MSP430. [8]
- (b) Discuss timers and counters of MSP430. [8]

UNIT - III

- Q.3 (a) How ARM processor is better for embedded system development? [8]
- (b) Explain current program status register. [8]

OR

- (a) Explain pipeline stages in ARM processor. [8]
- (b) Explain vector table of ARM processor. [8]

UNIT - IV

- Q.4 (a) Explain 8051 flag bits and register banks. [8]
- (b) What is indexed addressing mode? Explain by a suitable example. [8]

OR

- (a) Explain architecture of 8051. [8]
(b) What is interrupt? Explain interrupt programming. [8]

UNIT – V

- Q.5 (a) What are the performance issues that affect the embedded system? [8]
(b) What is sleep mode? [8]

OR

- (a) How smoke detector system works? Give suitable block diagram. [8]
(b) How we can optimize CPU power? [8]
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