

Registration No. :

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Total number of printed pages – 2

B. Tech
CPEC5305(Old)

Sixth Semester (Back) Examination – 2013
MICROPROCESSOR AND MICROCONTROLLER

BRANCH : EC, ETC, IEE

QUESTION CODE : B364

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.*

1. Answer the following questions : 2 × 10
- (a) How address and data lines are demultiplexed in 8085 ?
- (b) What is the function performed by SIM instruction in 8085 ?
- (c) What is pipelined architecture?
- (d) How the interrupts can be masked or unmasked in 8086 ?
- (e) What are the signals involved in memory bank selection in 8086 micro processor ?
- (f) How clock signal is generated in 8086 ? What is the maximum internal clock frequency of 8086 ?
- (g) Differentiate between Microprocessor and Microcontroller
- (h) Write the format of KW1 in 8259.
- (i) List the interrupts of 8051 microcontroller.
- (j) What are register banks in 8051 microcontroller ?
2. (a) Explain the various logical and arithmetic instructions available in 8085 microprocessor. 7

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- (b) Explain the function of various flags of 8085 microprocessor. 3
3. (a) Differentiate between I/O mapped I/O and memory mapped I/O. 5
- (b) Write an 8085 assembly language program to convert 8 bit binary to ASCII code. 5
4. (a) Discuss the 80387 Math Coprocessor used in 80386 microprocessor. 5
- (b) Discuss the salient features of 8259 – programmable interrupt controller. 5
5. With a suitable block diagram, explain the architecture of 8051 microcontroller. 10
6. What operation can be performed by using the instruction SUB A ? Specify the status of Z and CY ? Write the assembly language instruction to 10
- (a) load 00H to accumulator,
- (b) Decrement the accumulator and
- (c) Display the answer.
7. (a) Explain the Channels and registers of 8257 DMA Controller 5
- (b) When a key closure is found, the microprocessor waits for 10 to 20 ms before it accepts input ? Write a delay routine for above. 5
8. Write short notes on any **two** of the following : 5×2
- (a) Features of Pentium Processor
- (b) Registers in 80386 microprocessor
- (c) Interfacing of the 8051 microcontroller to 8255
- (d) 8055 interrupts

