

4E2914

Roll No. : _____

Total Printed Pages : **3****4E2914**

B. Tech. (Sem. IV) (Main / Back) Examination, June/July - 2013
4CS1 Microprocessor & Interface

Time : **3 Hours**][Total Marks : **80**[Min. Passing Marks : **24**

*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.
 (Mentioned in form No. 205)

1. NIL2. NIL**UNIT - I**

1 (a) Explain the function of various control and status signals available on 8085 microprocessor.

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(b) Why are $AD_7 - AD_0$ lines multiplexed ? with the help of latching circuit, explain how these lines are demultiplexed ?

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OR

1 (a) Explain the function of program counter, Accumulator, stack pointer and flag register in 8085 microprocessor in brief.

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(b) Explain the function of various types of buses in 8085 microprocessor in brief.

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UNIT - II

2 (a) Explain the all type of Rotate instructions with the help of suitable examples.

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[Contd...

- (b) Write a program to store hexadecimal data AB in memory location 2300, split the data in the form of OA and OB, and store them in memory location 2501 and 2502.

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OR

- 2 (a) Compare the function of the following instruction pairs :

- (i) RST and RET
 (ii) XTHL and XCHG
 (iii) JMP and CALL
 (iv) STAX and LDAX

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- (b) Describe various addressing modes available in 8085 microprocessor with two example of each.

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UNIT - III

- 3 (a) What is the use of "Stack" ? Illustrate the PUSH and POP operations with help of suitable example.

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- (b) Draw block diagram of 8259 programmable interrupt controller and explain function of various blocks.

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OR

- 3 (a) Explain the machine cycles of CALL and RET instructions with the help of timing diagram.

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- (b) What do you know about the interrupt facilities available with 8085. Explain the RIM and SIM instruction briefly.

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UNIT - IV

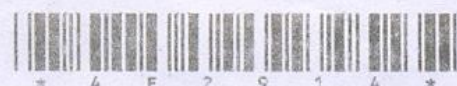
- 4 (a) Explain various programming modes of 8279 keyboard and Display controller. Also draw a block diagram showing its interfacing with microprocessor 8085.

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- (b) Explain the all operation mode of 8255 in brief.

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OR



- 4 (a) Explain the control word of 8254 PIT with example. Also explain the all operation modes of 8254 with diagram. 8
- (b) Design a square wave generator with a pulse width of 150 μ sec. by using 8254. Set the timer in mode 3. The clock frequency is 2MHz. 8

UNIT - V

- 5 (a) Write brief technical note on bus standard RS 232C and IEEE 488. 8
- (b) Draw the block diagram and pin description of USART 8251 and briefly explain formats of its mode, command and status words. 8

OR

- 5 (a) Explain the application of microprocessor in Interfacing scanned multiplexed display and liquid crystal display. 8
- (b) Explain RS 422A in brief with the use of diagram. 8

