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Reg. No.....

Name.....



# B.TECH. DEGREE EXAMINATION, JUNE 2014

## Fourth Semester

Branch : Computer Science and Engineering

CS 010 405—MICROPROCESSOR SYSTEMS (CS)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

### Part A

*Answer* **all** *questions.*

*Each question carries* 3 *marks.*

1. What is Microprocessor ? Give the power supply and Clock frequency of 8085.
2. Define instruction cycle, machine cycle and T-state.
3. Explain the signals HOLD, READY and SID.
4. What is synchronous data transfer ?
5. What is the use of modem control unit in 8251 ?

(5 × 3 = 15 marks)

### Part B

*Answer* **all** *questions.*

*Each question carries* 5 *marks.*

6. Compare CALL and PUSH instructions.
7. Difference between memory mapped I/O and peripheral I/O.
8. Explain briefly about the different types of interrupts in 8085.
9. Briefly explain the DMA data transfer.
10. Discuss the features of 8251.

(5 × 5 = 25 marks)

Turn over

## Part C

*Answer* **all** *questions.*
*Each question carries* 12 *marks.*

11. Explain the addressing modes of 8085 with example.

*Or*

12. Explain the different types of instruction in 8085.

13. Explain various machine cycles supported by 8085.

*Or*

14. Write a program to arrange '*n*' numbers in ascending order.

15. With neat sketch, explain the function of Programmable Interrupt Controller.

*Or*

16. Explain hardware and software interrupts in 8085 microprocessor ?

17. Explain any *one* of the modes of 8255 in detail.

*Or*

18. Differentiate synchronous and asynchronous data transfer schemes.

19. With neat sketch, explain the functions of 8251.

*Or*

20. Design an interface circuit needed to connect DIP switch as an input device and display the value of the key pressed using a 7 segment LED display. Using 8085 system, write a program to implement the same.

(5 × 12 = 60 marks)