Hall Ticket Number:

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Code No. : 22113 O2

VASAVI COLLEGE OF ENGINEERING (*Autonomous*), HYDERABAD
B.E. (C.S.E.) II Year II-Semester Backlog Examinations, May-2017
Microprocessors and Interfacing

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Explain the function of ALU and IO/M signals in the 8085 architecture.

2. Perform logical operations RAL, RAR if Accumulator contents = 10100111, CF = 0.

3. Write a program to
   a) clear the accumulator
   b) add 47H
   c) Display the results after subtracting 92H and after adding 64H

4. When a POP operation is performed on a stack, what is the total effect of this in microprocessor?

5. Specify the register contents and the flag status(S,Z,CY) after the instruction ORA A is executed.
   MVI A,A9H
   MVI B,57H
   ADD B
   ORA A

6. Give the difference between JZ and JNZ.

7. How can you put the 8051 in Idle Mode?

8. Why the number of out ports in the peripheral-mapped I/O is restricted to 256 ports?

9. What are the two modes of DMA execution?

10. How many interrupts are there in 8086?

Part-B (5 × 10 = 50 Marks)
(All bits carry equal marks)

11. a) Illustrate the instruction sets of 8085.
    b) Write instructions to clear the CY flag, to load number FFH in register C, and to add 01 to register C. If the cy flag is set, display 01 at the output port: Otherwise display the content of register C.

12. a) Draw and explain Programmable Interrupt Controller.
    b) Write an assembly language program to multiply two 8-bit numbers residing in memory.

13. a) Draw and explain keyboard interfacing with 8085.
    b) Write an assembly language program to display character 'A' using keyboard interface.

14. a) What are the addressing modes in 8051 explain each with an example?
    b) Compare various families of 8-bit micro controllers.

15. a) What are the differences between 8-bit, 16-bit and 32-bit microprocessors? Explain.
    b) Draw the register set of 8086 and explain each one in detail.

16. a) Draw the timing diagram for MVI A,32h.
    b) Compare vectored and non-vectored interrupts in 8085.

17. Write short notes on any **two** of the following:
    a) RS 232C
    b) Interfacing of DAC
    c) Multi-Core Processors

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