M.C.A. DEGREE EXAMINATIONS: APRIL / MAY 2009

Third Semester

P07CA302 MICROPROCESSOR AND ITS APPLICATIONS

Time: Three Hours   Maximum Marks: 100

Answer ALL the Questions:-

PART A (20 x 1 = 20 Marks)

1. The Intel 8085 is an_____ bit microprocessor.
   (A). 8   (B). 16   (C). 24   (D). 32

2. Identify the IMMEDIATE Addressing Mode in the following instructions.
   (A). LDA 2035H   (B). MOV B,C   (C). MVI B, 05   (D). STC

3. The 8085 chip has _____ interrupt pins.
   (A). 4   (B). 5   (C). 6   (D). 7

4. The _____ instruction sends the contents of the accumulator to the interrupt mask register and serial input line.
   (A). SIM   (B). RIM   (C). RLC   (D). IN

5. The Intel 8086 is designed using the _____ technology.
   (A). CMOS   (B). MOS   (C). High-density MOS   (D). NMOS

6. _____ 8086 instruction can be used to convert a code such as ASCII into another code such as EBCDIC.
   (A). XCHG   (B). XLAT   (C). LEA   (D). LDS

7. What happens after execution of the following 8086 instruction sequence.
   ADD   CL, DL   ; $[CL]=32_{16}$ $[DL]=35_{16}$
   MOV   AL, CL   ;
   AAA   ;

   (A). [AL]=07   (B). [AL]=03   (C). [AL]=09   (D). [AL]=04

8. Which 8086 instruction is used to adjust the content of AL after addition of two ASCII characters?
   (A). AAD   (B). AAM   (C). AAA   (D). AAS

9. When the input pin MN/$\overline{\text{MX}}$ is LOW, the 8086 is configured to support _____ systems.
   (A). Uni processor   (B). Multi Processor
   (P). Parallel Processor   (D). Vector Processor

10. The 8086 minimum bus cycle contains _____ CPU clock periods called T states.
    (A). Two   (B). Three   (C). Four   (D). Five

11. The _____ dynamic ram controller can be interfaced with the 8086 to build a dynamic memory system.
    (A).8022   (B). 8002   (C). 8200   (D). 8202

12. How many 8282 octal latches are used in the 8086 interface to memory and I/O maps?
    (A). One   (B). Two
    (C). Three   (D). Four

13. The 80836 contains a total of _____ instructions.
    (A). 127   (B). 128
    (C). 129   (D). 219

14. The 80836 I/O space refers to _____ memory.
    (A). Physical   (B).Logical
    (C). Virtual   (D). Associate

15. How many interrupt pins are available on the 80386 ?
    (A). 1   (B). 2
    (C). 3   (D). 4

16. _____ pins are the 80836 bus arbitration signals, used for DMA transfers.
    (A). HOLD and HLDA   (B). D/C# and M/IO#
    (C). ADS# and NA#   (D). BS16# and READY

17. The CRT terminal stores the pattern of dot matrix in_____
    (A). RAM   (B). ROM
    (C).DRAM   (D).EPROM

18. The _____ is a dot matrix printer controller.
    (A). 8275   (B). 8279
    (C). 8295   (D). 8297

19. The _____ will ignore all keys pressed until only one remains down.

    (A). N-Key rollover   (B). Two Key lockout
    (C).Keyboard lock out   (D). Shift key rollover

20. The Intel 8275 is a single chip (40 pin)_____.
    (A). DMA controller   (B). Printer Controller
    (C). CRT Controller   (D). Keyboard Display controller.

PART B (5 x 16 = 80 Marks)

21. (a). (i). Write an 8085 assembly language program to add a 16-bit number in locations 5000H(high byte) and 5001H(low byte) with another 16-bit number stored in 5002H(high byte) and 5003H(low byte). Store result in BC.   (8)

    (ii). Discuss briefly about the 8085 DMA.   (8)

(OR)

21. (b). Explain the 8085 Instruction Timing and Execution in detail.   (16)

22. (a). Explain briefly about the 8086 Addressing Modes.   (16)

(OR)

22. (b). Discuss briefly about the Program Control Instructions.   (16)

23. (a). (i). Explain the 8086 Address and Data bus concepts. (12)

    (ii). Does the 8086 have an on-chip clock generation circuit? Comment (4)

(OR)

23. (b). (i). Briefly discuss about the 8086 Programmed I/O. (12)

    (ii). Write notes on 8086 EPROM (4)

24. (a).Explain the 80386 basic programming model briefly. (16)

(OR)

24. (b). Discuss about the 80386 Operation Modes. (16)

A transfers.

25. (a). Explain the Intel 8279 Keyboard display controller chip briefly. (16)

(OR)

25. (b). Illustrate briefly about the Intel's numeric Coprocessors. (16)

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er in locations
mber stored in
    (8)

    (8)

    (16)

    (16)

    (16)