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06EC62

Sixth Semester B.E. Degree Examination, December 2012
Micro Processors

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1
 - a. With neat block diagram, explain how 8086 CPU supports pipelined architecture. (10 Marks)
 - b. Explain significance of special bit indicators available in 8086. (05 Marks)
 - c. If the opcode of MOV instruction is 100010 then find machine code for MOV[BX + 24h], AL. (05 Marks)

- 2
 - a. With respect to 8086 CPU explain the following:
 - i) LDS BX, [LOC]
 - ii) DAS
 - iii) LOOP
 - iv) DB
 - v) Length. (10 Marks)
 - b. Bring out the difference between MOV AX, BX and MOV AX, [BX]. (02 Marks)
 - c. WALP to pack the two unpacked BCD numbers stored in the locations LOC and LOC + 1. (05 Marks)
 - d. Replace the following program segment by its single equivalent instruction:
NEG BL
ADD AL, BL
CMC. (03 Marks)

- 3
 - a. Using table translation method WALP to find equivalent seven segment code for given BCD digit. (08 Marks)
 - b. WALP to read a string from key board and check whether it is a palindrome or not. If palindrome display PAL else NPAL on monitor. (12 Marks)

- 4
 - a. What is an interrupt? Discuss the interrupt classification in 8086. (07 Marks)
 - b. What do you mean by an IVT? Explain IVT of 8086 microprocessor. (07 Marks)
 - c. Explain microprocessor's response for an INTR interrupt. (06 Marks)

PART – B

- 5
 - a. Differentiate between memory mapped I/O and I/O mapped I/O schemes. (04 Marks)
 - b. With neat diagram write an 8086 program for 4×4 matrix keyboard interface and display key value on monitor. (10 Marks)
 - c. WALP to rotate the stepper motor for 270° in anticlock wise direction. (06 Marks)

- 6** a. Explain data types for 8087 NDP. (10 Marks)
b. Represent 20.59375_{10} into short real form. (04 Marks)
c. Explain the following with respect to 8087 coprocessor:
i) FLD src
ii) FADD
iii) FLDPI. (06 Marks)
- 7** Write a note on:
a. Minimum mode configuration of 8086. (10 Marks)
b. PCI bus. (05 Marks)
c. Flow chart to generate USB data. (05 Marks)
- 8** a. With neat block diagram, explain memory organization in 80386 processor. (08 Marks)
b. Explain the following terms for 80486 processor:
i) AHOLD
ii) BREQ
iii) FLUSH. (06 Marks)
c. Explain branch prediction logic and cache structure of Pentium processor. (06 Marks)

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