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06EC62

Sixth Semester B.E. Degree Examination, December 2011
Microprocessors

Time: 3 hrs. Max. Marks:100

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

PART – A

1 a. With a neat sketch, explain the CPU architecture of 8086. **(10 Marks)**

b. Explain with example, the different addressing modes of the 8086 microprocessor. **(10 Marks)**

2 a. What is the segment override prefix? Explain with examples. **(05 Marks)**

b. What do the following instructions do?
i) ROR ii) RCR iii) SHR iv) STD v) JE **(05 Marks)**

c. Explain the following:
i) WAIT ii) HLT iii) NOP iv) LOCK v) ESC **(10 Marks)**

3 a. Write a display macro, using for statement that is used to display 'VTU' on the screen. **(05 Marks)**

b. Write the DOS function CALL numbers, to achieve the following:
i) Reading a key with an echo. ii) Reading a key without an echo.
iii) Reading an entire line with echo. iv) To display an ASCII character.
v) To display a string of characters. **(05 Marks)**

c. Write a 8086 program to enter a string and display the reversed string on the screen. **(10 Marks)**

4 a. Explain the software interrupt operation of 8086. **(05 Marks)**

b. Explain the functions of atleast five dedicated interrupts in 8086. **(10 Marks)**

c. Which are the two hardware interrupt inputs of the 8086 microprocessor? Write the interrupt priority of 8086. **(05 Marks)**

PART – B

5 a. Explain the interfacing of a 4×4 keyboard to the 8086 microprocessor. **(10 Marks)**

b. Explain the interfacing of a stepper motor to a microcomputer. **(10 Marks)**

6 a. Write a program to find the area of a circle, with the arithmetic co-processor. **(08 Marks)**

b. Differentiate between the following instructions :
i) Forward and reverse division ii) FADD and FADDP
iii) FINIT and FNINIT iv) FTST and FXAM **(12 Marks)**

7 a. Bring out the differences between minimum mode and maximum mode operation of 8086. **(04 Marks)**

b. Explain the read cycle timing diagram for minimum mode. **(08 Marks)**

c. Write a note on the peripheral component interconnect (PCI) bus. **(08 Marks)**

8 a. Write a short note on Pentium processor. **(08 Marks)**

b. Describe the features of i) 80386 and 80486 ii) Memory system of 80386. **(12 Marks)**

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