

USN

--	--	--	--	--	--	--	--	--	--

06EC62

Sixth Semester B.E. Degree Examination, June/July 2016
Microprocessor

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1
 - a. Explain 8086 CPU architecture, with neat diagram. (10 Marks)
 - b. Explain advantages of segmentation. (04 Marks)
 - c. If DS = 1000H , SS = 2000H , SI = 0500H , BP = 100H , DI = 0700H and LIST = 200H. Calculate physical address of the location being accessed in following instructions.
 - i) MOV AX, [DI] ii) MOV DX, [SI] [BP] iii) MOV CX, LIST [DI]. (06 Marks)
- 2
 - a. Explain the following instructions with suitable example :
 - i) AAA ii) AAM iii) AAD. (06 Marks)
 - b. Write an assembly language program to multiply two 32-bit numbers. (08 Marks)
 - c. What are assembler directives? Explain the directives DQ, EQU, ORG and DUP. (06 Marks)
- 3
 - a. Explain the string primitives MOVS, CMPS and SCAS with examples. (06 Marks)
 - b. Write an ALP to concatenate two strings using string instructions. (09 Marks)
 - c. List the differences between procedures and macros. (05 Marks)
- 4
 - a. Explain 8086 interrupts with neat diagram of Interrupt Vector Table. (10 Marks)
 - b. Write the 8086 instructions to set trap flag. (04 Marks)
 - c. Explain the steps carried out by 8086, when an interrupt is generated. (06 Marks)

PART – B

- 5
 - a. Explain keyboard interfacing, with the help of flow chart. (10 Marks)
 - b. With neat block diagram, explain multiplexed seven segment display interfacing. (10 Marks)
- 6
 - a. Explain 8087 data types specifying their size and range. (07 Marks)
 - b. Write 8087 program to compute resonant frequency of LC tank circuit. Assume L = 10mH and C = 50μF. (07 Marks)
 - c. Explain the concept of loosely coupled and closely coupled configurations. (06 Marks)
- 7
 - a. Explain the functions of following pins of 8086 :
 - i) 8086 MN/MX ii) M/IO iii) ALE iv) READY. (08 Marks)
 - b. List the features of USB and also explain its pin details and data format. (06 Marks)
 - c. Write a short note on PCI bus. (06 Marks)
- 8
 - a. Explain the special registers of 80386 processor. (06 Marks)
 - b. Explain the memory organization of 80486, with neat diagram. (08 Marks)
 - c. Explain features of Pentium processor with neat diagram. (06 Marks)
