Code No: 114CN

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, October/November - 2016
COMPUTER ORGANIZATION
(Computer Science and Engineering)

Time: 3 Hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit.
Each question carries 10 marks and may have a, b, c as sub questions.

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PART - A   **(25 Marks)**

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1.a)   Describe BUN instruction.   [2]
  b)   X = (A+B)*(C+D) write the zero address instruction.   [3]
  c)   Describe I/O command.   [2]
  d)   Differentiate vectored and non vectored interrupt.   [3]
  e)   Define content addressable memory.   [2]
  f)   Differentiate write through and write back.   [3]
  g)   Discuss the purpose of INTR in 8086.   [2]
  h)   Write the memory read statements in 8086.   [3]
  i)   Explain sorting instructions in 8086.   [2]
  j)   Write instructions to Load space character into register CX.   [3]

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PART - B   **(50 Marks)**

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2.   Explain Addressing mode with numeric example.   [10]
<div align="center">**OR**</div>
3.a)   Construct circuit for program control status bit condition.
  b)   Describe memory reference instruction.   [5+5]

4.a)   Differentiate isolated I/O and memory mapped I/O.
  b)   Design parallel priority interrupt hardware for a system with eight interrupt
       sources.   [5+5]
<div align="center">**OR**</div>
5.   Explain DMA controller and DMA transfer with diagram.   [10]

6   Describe virtual memory in detail.   [10]
<div align="center">**OR**</div>
7.a)   How many lines must be decoded for chip select? Specify the size of the
       decoders.
  b)   Design a block diagram, how multiple matched words can be read out from an
       associate memory
  c)   Describe associate mapping in cache memory.   [4+3+3]

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8.   Describe concepts of pipelining in 8086.   [10]

OR

9.   Explain 8086 CPU with pin diagram.   [10]

10.a) Write a program to multiply 2 numbers (16-bit data) for 8086.
   b) Find number of times letter 'e' exist in the string "exercise", Store the count at
       memory.   [5+5]

OR

11.a) Write a 8086 AL Program For Displaying The String using Library Functions.
    b) Write a 8086 AL Program For Arithmetic and Logic Instructions.   [5+5]

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