Code No: 134AK

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, April - 2018
COMPUTER ORGANIZATION
(Common to CSE, IT)

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.

PART- A

(25 Marks)

1.a) Explain RTL and its control function.   [2]
  b) Compare horizontal and vertical organization.   [3]
  c) Differentiate jump and loop instructions.   [2]
  d) Briefly explain special processor activities.   [3]
  e) What is an assembler?   [2]
  f) Explain the machine code for: LES DI,[0600H] and NEG 50[BP].   [3]
  g) Explain overflow and underflow.   [2]
  h) Differentiate isolated I/O and memory mapped I/O.   [3]
  i) Explain the cache incoherence.   [2]
  j) Explain the locality of reference.   [3]

PART-B

(50 Marks)

2.a) List and explain different performance measures used to represent a computer system
     performance.
  b) Elucidate the functioning of a Micro program sequencer.   [5+5]

OR

3.a) Elucidate common bus system.
  b) Formulate a mapping procedure that provides eight consecutive micro instructions for
     each routine. The operation code has 7 bits and control memory has 4096 words.   [5+5]

4.a) Explain the register organization in 8086.
  b) Elucidate machine language instruction formats.   [5+5]

OR

5.a) Explain the pin configuration details of 8086.
  b) Explain the assembler directives with examples.   [5+5]

6.a) Explain the steps involved in writing a program using an assembler.
  b) Write a program to find out the number of positive numbers and negative numbers from a
     given series of signed numbers.   [5+5]

OR

7.a) Add the contents of the memory location 4000H:0600H to contents of 5000H:0700H and
     store the result in 8000H:0900H
  b) Write a program for addition of two numbers.   [5+5]

8.a) Draw a flow chart for Floating point Add/subtract operations.
  b) Illustrate asynchronous communication interface in detail.   [5+5]

OR

9.a) Explain in detail with neat sketch Booth Multiplication Algorithm.
  b) Explain different types of modes of control.   [5+5]

10.a) Explain arithmetic pipeline with example.
  b) Elucidate Inter processor communication.   [5+5]

OR

11.a) Elucidate array processor in detail.
  b) Explain various Interconnection Structures.   [5+5]

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