**R16**

Code No: 134AK

## 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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