Code No: 153AH **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year I Semester Examinations, April/May - 2023
COMPUTER ORGANIZATION AND MICROPROCESSOR
(Information Technology)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	Draw the block diagram of a digital computer.	[2]
b)	What is Fetch and Decode? Explain.	[3]
c)	What is the function of READY and HLDA signals of 8086?	[2]
d)	Explain about LOCK prefix. What is its use?	[3]
e)	State the disadvantages of machine level programming.	[2]
f)	Illustrate the process of Interrupt Programming.	[3]
g)	What is Complement and increment?	[2]
h)	Discuss handshaking in asynchronous data transfer.	[3]
i)	Define Cache Memory and its use.	[2]
j)	Brief about Instruction pipeline.	[3]

PART – B

(50 Marks)

2. Discuss about Computer Instructions and draw the basic computer instruction formats. [10]

OR

3. Discuss about Conditional Branching, Mapping of Instruction and Subroutines of Address Sequencing. [10]

4. Explain in detail about addressing modes. [10]

OR

5.a) Explain about Maximum mode 8086 System and timings.
b) Brief about Assembler directives and operators. [5+5]

6.a) Write a program to add the contents of the memory location 2000H:0500H to contents of 3000H:0600H and store the result in 5000H:0700H.
b) Explain in detail about Stack structure of 8086/88. [5+5]

OR

7. Brief about timing and delays. [10]

8. Explain Booth Multiplication algorithm with an example. [10]

OR

9.a) Explain BCD adder with block diagram.
b) Discuss DMA in detail. [5+5]

10.a) With diagram explain Memory Hierarchy.
b) Elaborate Parallel Processing in detail. [5+5]

OR

11.a) What is Auxiliary memory? Explain the process in it.
b) Discuss the working and the importance of RISC Pipeline. [5+5]

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