

Exam.Code:0921
Sub. Code: 6836

1078

**B.E. (Information Technology)
Third Semester**

ITE-344: Computer Architecture and Organization

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Attempt the following:-
 - a) What is Microprogramming? List the advantages offered by it.
 - b) What does the following instruction do: POP What are its operands? How many bytes are consumed by it?
 - c) Present the hardware implementation of the below given register transfer and selection instruction:
 If $y = 1$,
 then $A \leftarrow C$
 else $A \leftarrow D$.
 - d) Explain in brief the Interrupt driven I/O mode of data transfer.
 - e) Describe the function performed by Array Processors? (5x2)

UNIT – I

- II. What are the functions offered by following registers:
Accumulator, Program counter, Stack Pointer; and Multipurpose registers (10)
- III. a) Give a gate level design for the following instruction: $Z \leftarrow A'(B+C)$
b) List the features of a Micro Programmed Control design. (5,5)
- IV. a) With the help of an example, describe Indirect addressing mode.
b) List the characteristics of RISC and CISC. (5,5)

UNIT – II

- V. a) Discuss the concept of I/O Processors.
b) What does a DMA do? (5,5)

P.T.O.

(2)

- VI. Present the memory hierarchy. What is the advantage offered by Cache memory? Where does Associative memory find its application? (10)
- VII. What are the various ways of parallel processing? Highlight the feature of each in detail. (10)

x-x-x