24165

B. Tech 4th Sem. (Information Technology/C. E. E.)

Examination – May, 2012

COMPUTER ARCHITECTURE AND ORGANISATIONS

Paper : CSE - 210-F

Time : Three Hours]   *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complain in this regard, will be entertained after examination.

Note :   First question is *compulsory*. Attempt *five* questions in all selecting at least *one* question from each Unit. All questions carry equal marks.

1. Write short notes on the following :   20

   (a) Logic Gates

   (b) Latches

   (c) Addressing Mode

   (d) RAM

   (e) PROM

(f) Interrupt

(g) Cache

(h) Instruction Set

UNIT – I

2. Describe Flynn's classifications of computers in detail with appropriate examples.   20

3. (a) Explain Instruction Set Architecture in detail.   10

     (b) Explain different types of instructions applied on instruction set with examples.   10

UNIT – II

4. Define addressing modes ? Explain different types of it with examples.   20

5. (a) Design the microinstruction sequence counter.   10

     (b) Explain associative organization of cache memory.   10

UNIT – III

6. Explain accumulated based CPU architecture types and solve the equation $X = (A + B) * (C + D)$ using above said architechture.   20

7. A computer uses RAM chips of 1024 × 1 capacities. Answer the following :   20

(a) How many chips are needed and how should there address lines be connected to provide a memory capacity of 1024 bytes.

(b) How many chips are needed to provide a memory of 16 K bytes.

UNIT – IV

8. (a) Explain Amdah's law in detail.　　　　10

　(b) Explain micro-processor level of parallelism.　10

9. (a) Explain types of instruction in 8086 in detail.　10

　(b) Design Binary to Octal decoder.　　　　10

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