

13. Define the concept of Cache-memory. Explain set associative mapping in detail with suitable example. 11

Or

Why are memory organized in hierarchy ?
Write the factors for selecting a particular memory type with the help of diagram.

Roll No.

Exam Code : J-19

Subject Code—0116

P.G.D.C.A/M.Sc./M.C.A. EXAMINATION

(Main & Re-appear)

(Batch 2009 Onwards)

(Second Semester)

(MCA-3 Years)

COMPUTER ORGANIZATION AND
ARCHITECTURE

MC-07

Time : 3 Hours

Maximum Marks : 70

Section A

Note : Attempt any *Seven* questions. **7×5=35**

1. Define Computer Architecture.
2. Define Microinstruction and microprogram.

3. What is the use of sequencer explain, along with its functionality ?
4. Differentiate between microprogram and hardwired control.
5. Contrast direct address mode and indirect address mode.
6. What is interrupt and how is it different from subroutine call ?
7. Explain the characteristic of RISC.
8. Convert the following arithmetic expression from reverse polish notation to infix :
A B C D E + * - /
9. Draw a four segment pipeline with space time diagram.
10. Define DMA with its operational block diagram.

Section B

Note : Attempt all the questions.

11. What is difference between direct and indirect addressing mode ? How many memory references are needed for each type of addressing to bring operand into a processor register ? Explain. **12**

Or

Define Interrupts. What are the different types of interrupts ?

12. Draw the diagram of computer with input output processor. Explain CPU-I/OP communication with the help of flow chart. **12**

Or

What is the difference between linear and non-linear pipeline ? Write their relative advantages and applications.