(c) Explain the working of Auxiliary Memory. [6]

7. Describe the Memory Hierarchy, in terms of execution speed, cost, execution time and size. Explain the following properties in reference to Cache memory : Principles of Locality, Coherence and Inclusion. [16]

Unit-IV

8. (a) Describe the Flynn's Classification of computer system. [8]

(b) Explain the concept of Reservation table. [8]

9. (a) List down various principles of Linear pipeline. Also mention the advantages of applying it in the system. [8]

(b) Pictorially represent the working of an Instruction Pipeline. Mention the basic conditions that must be satisfied before Pipelining can be installed. [8]

Roll No. .....

67072

M.C.A. 2nd Sem.
(with new notes - M.M. 80 w.e.f. May, 2013)

Examination–May, 2016

Computer Organisation & Architecture (New)

Paper-MCA-202

Time : 3 hours ***Max. Marks : 80***

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

Note : Question No. **1** is **compulsory**. Attempt any **four** more questions from Unit I to Unit IV, selecting **one** question from each unit. All questions carry equal marks.

[8×2=16]

1. (a) Define functional units of a computer designed for business purpose.

(b) What is the basic purpose of system buses?

(c) What do you understand by effective address of an operand?

(d) List down various types of registers available in computer system.

(e) Write short note on working of an assembler.

(f) Describe the term Computer Organization.

(g) Explain various design principles of an effective pipeline.

(h) Enlist various challenges faced during Parallel Processing.

Unit-I

2. (a) Operating Systems are the main core of any computer system", support your answer by mentioning various functions of operating system. [8]

(b) Differentiate between an Instruction and Micro Instruction, with an illustration. [8]

3. Explain in detail the complete Instruction Cycle, along with its various phases and also depict the timing signals at various steps, with the help of a flowchart. [16]

Unit-II

4. (a) Explain why an interface is always required between the peripheral and processor communication. [8]

(b) Describe the working of any four Data Transfer and Data Manipulation instructions each. [8]

5. (a) Describe various Instruction formats, based upon the number of operands included. [8]

(b) Explain the working of Base addressing mode and Index addressing mode. [8]

Unit-III

6. (a) Define Interrupts. Why is it required to set priorities for interrupts and how these priorities are solved. Explain any one such method to solve the priority of interrupts. [5]

(b) "It is mandatory to use Direct Memory Access in every computer system", Give your views and support your answer. [5]