K16P 0103

Reg. No. : ....

Name : ....

I Semester M.C.A. Degree (Reg./Sup./Imp.) Examination, February 2016
(2013 and Earlier Admn.)
MCAC 1.1 : COMPUTER ORGANISATION

Time : 3 Hours   Max. Marks : 80

Instructions : 1) Answer **any five** questions.
2) **All** questions carry **equal** marks.

1. a) What are the significant of data types and respective complements with
   suitable examples ?   8

   b) Define a micro operation. Explain the micro operations involved in a
   fetch cycle.   8

2. a) What are interrupts ? Explain different classes of interrupts.   8

   b) Explain the characteristics of a large register file and Cache.   8

3. a) Describe various types of addressing modes.   8

   b) Discuss the general characteristics of a CISC machine.   8

4. a) Explain the arithmetic operations on floating point numbers.   8

   b) Discuss basic instruction cycle with neat state diagram.   8

5. a) With neat diagram how I/O bus and interface modules are connected.   8

   b) Explain associate mapping method in cache memory.   8

6. a) Explain the processor initiated conditional and unconditional data transfers.   8

   b) Explain micro programmed control unit with its functioning along with a
   neat diagram.   8

7. a) Explain neatly synchronous and asynchronous bus structure with timing diagrams. 8

   b) What is arbitration ? Why is it required ? What are the different methods of arbitration ? 8

8. Write short notes on (any four) : (4×4)

   a) Virtual memory.

   b) Priority interrupt.

   c) Vector processor.

   d) Decimal arithmetic operations.

   e) RISC processor.