Roll No. .....

67062

MCA Regular 2nd Semester w. e. f. Examination – May, 2012

COMPUTER ORGANIZATION & ARCHITECTURE

Paper : MCA-202

Time : Three hours] *[Maximum 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 examination.

Note : Attempt any *five* questions, selecting at least *one* question from each Unit. All questions carry equal marks.

UNIT – I

1. (a) Define Register. Where registers are used ? How many types of registers are there in basic computer ? 8

(b) Explain with examples different types of Computer Instructions Format. 8

2. (a) Differentiate between : $2 \times 4 = 8$

(i) Compiler & Interpreter

(ii) Instruction & Microinstruction

(b) What do mean by Addressing Modes ? Explain different types of Addressing modes with example. 8

UNIT – II

3. (a) Explain the multiplication of Floating point numbers with example. 10

(b) Draw the flowchart of Memory Reference Instruction Cycle. 6

4. (a) Describe the following instructions : 8

BUN, ISZ, SKO, CME

(b) Explain the addition & subtraction of Floating point numbers. 8

UNIT – III

5. (a) Define Interface. Why Interface is required between I/O and processor ? 4

(b) Define Associative memory with its working. 6

(c) What do you mean by mapping (cache memory) ? Explain its various types. 6

6. Write short notes : $4 \times 4 = 16$

(a) Housekeeping operations,

(b) Strobe Signal,

(c) IOP,

(d) Volatile memory.

UNIT – IV

7. (a) Explain Hypercube interconnection structure. List its strength & short comings. 6

(b) How pipelining supports parallel processing ? Explain with case study of Arithmetic pipeline. 10

8. Explain : $4 \times 4 = 16$

(a) Interleaved Memory

(b) SIMD

(c) Supercomputer

(d) Pipeline conflict
