V Semester B.C.A. Degree Examination, October/November 2012
(Y2K7 Scheme)
BCA-501 : COMPUTER ARCHITECTURE

Time : 3 Hours

Max. Marks : 80

Instruction : *Answer all the Sections.*

SECTION – A

I. Answer **any 8** questions. **Each** question carries **3** marks. (3×8=24)

1) Define universal gate with example.

2) What is multiplexer ? Explain the operation.

3) Define ROM and its types.

4) Expand the following :

    i) ASCII   ii) EBCDIC   iii) BCD.

5) What is an accumulator ? Explain with example.

6) Explain the instructions ION, IOF and STA.

7) Explain control word format.

8) What is meant by reverse Polish notation ?

9) Explain interrupts and its types with example.

10) Explain hit ratio with example.

P.T.O.

SECTION – B

II. Answer **any four** full questions. **Each** full questions carries **14** marks.   (14×4=56)

11) a) What is meant by flip-flop ? Explain its type with example.   7

   b) Explain half adder and full adder circuit with example.   7

12) a) Explain IC's and its types with example.   6

   b) Explain about 4-bit registers with logic diagram.   6

   c) Explain the advantages of registers.   2

13) a) Explain about 2's complement subtraction method with example.   7

   b) Explain about number representation with example.   7

14) a) Explain the basic computer design with flow-chart.   10

   b) Explain about input / output configuration.   4

15) a) Explain about addressing modes and its types.   7

   b) Explain the types of computer instructions with reference to the fixed
      operand.   7

16) a) Illustrate the concept of cache memory with mapping procedure.   7

   b) Explain the concept of page table in virtual memory.   7

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