

**B.C.A. (II Semester) Examination, March 2011**  
**COMPUTER ORGANIZATION AND ARCHITECTURE**

Time : 3 Hours

Max. Marks : 80

**Instructions :** 1) Answer *all* questions in Part – A, 6 out of 8 questions in Part – B and 3 out of 5 questions in Part – C.

2) Part – A : Questions from 1 to 8 carry 1 mark *each* and 9 to 14 carry 2 marks *each*.

3) Part – B : *Each* question carries 5 marks.

4) Part – C : *Each* question carries 10 marks.

PART – A

1. What is a computer ?
2. Define BIT and word.
3. 1 KB = \_\_\_\_\_ bytes.
4. Write the features of analytical engine.
5. What is the advantage of super computer ?
6. Write the block diagram of BCD adder.
7. What is a interrupt ?
8. What is static memory ?
9. Differentiate high level language and machine level language.
10. What is the purpose of memory stack ?
11. What is the drawback of CISC ?
12. What is parallel processing ?
13. Briefly explain a RAM chip.
14. What do you mean by access time ?

**P.T.O.**

## PART – B

1. Briefly explain Von Neumann Architecture.
2. Write a note on 3 state table buffers.
3. Explain booth multiplication algorithm.
4. Write a note on floating point operations.
5. Write a note on first pass.
6. With suitable example explain shift operations.
7. Briefly explain program driven IO.
8. What is *pipelining* ? Explain pipelining through *space-time diagram* for 5 instructions with 6 stages each.

## PART – C

1. Explain I and II Generation of Computers.
  2. With the help of a diagram explain 2 bit array multiplier.
  3. Explain the functioning of register stack.
  4. With the help of example explain different instruction formats.
  5. Explain the functioning of multiple interrupt and priority interrupt.
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