

**II Semester B.C.A. Examination, Feb./March 2010**  
**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 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) Define Von Neumann architecture.
- 2) What is address ?
- 3) In which generation microprocessors used.
- 4) Define Program counter.
- 5) What is an assembler ?
- 6) What are zero address machines ?
- 7) What is the use of DMA ?
- 8) What is access time ?
- 9) Write the functions of CU.
- 10) What are the uses of Super Computers ?
- 11) Define register stack.
- 12) What is pipelining ?
- 13) What is full duplex ? Give example ?
- 14) Define addressing mode.

**P.T.O.**

## PART – B

- 1) Write multiplication, division of floating point number with example.
- 2) Write flowchart for first pass assembler.
- 3) Explain interrupt driven I/O.
- 4) What are the applications of vector operations ?
- 5) What are the Flynn's classifications of computers ?
- 6) What are the characteristics of RISC machine ?
- 7) Write the memory hierarchy.
- 8) Write a combinational circuit for 2 bit by 2 bit array multiplier.

## PART – C

- 1) Explain booth multiplication algorithm with example.
  - 2) Explain different types of addressing modes.
  - 3) Explain frame format, control field of bit oriented protocol.
  - 4) Discuss multistage switching networks.
  - 5) Consider the following virtual page reference sequence page 1 2 3 4 2 1 5 6 2 1 2 3.  
Show the no. of page fault for a) LRU-3 b) FIFO-3 c) FIFO-4
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