



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/BCA/SEM-2/BCA-201/2011**  
**2011**  
**COMPUTER ARCHITECTURE AND SYSTEM**  
**SOFTWARE**

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**GROUP – A**

**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for the following :  $10 \times 1 = 10$ 
  - i) The program that translates a high-level language program to binary is called
    - a) compiler
    - b) byte code
    - c) operating system
    - d) none of these.
  - ii) There are two major types of control organization. They are
    - a) Hardwared control and micro-programmed control
    - b) Hardware and software
    - c) Operating system and hardware
    - d) System software and application software.



- iii) The full form of MRI is
  - a) Memory reference instruction
  - b) Memory reference interpreter
  - c) Memory reference interrupt
  - d) None of these.
- iv) The input symbolic program is called
  - a) Source program
  - b) Object-program
  - c) Byte code
  - d) None of these.
- v) The data register is sometimes called
  - a) Pipeline register
  - b) Buffer
  - c) Compiler
  - d) Sequencer.
- vi) The full form of PSW is
  - a) Program status word
  - b) Password status word
  - c) Program status work
  - d) Password status work.
- vii) The full form of RISC is
  - a) Reduced Instruction Set Computer
  - b) Register Instruction Set Computer
  - c) Reduced Instruction Set Component
  - d) None of these.
- viii) 9's complement of 546700 is
  - a) 453299
  - b) 483270
  - c) 32955
  - d) 669290.





**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.

7. Describe the rules of the language ? What do you mean by subroutine ? What is binary adder ?  $9 + 3 + 3$
8. What is parallel processing ? Describe the working principle of pipelining. Explain the major characteristics of an RISC processor.  $2 + 10 + 3$
9. Write the applications of vector processing. Explain memory interleaving.  $5 + 10$
10. a) Perform the subtraction with following unsigned decimal number by taking the 10's complement of the subtrahend.  
 $5250 - 1321$
- b) Perform the subtraction with the following unsigned binary number by taking the 2's complement of the subtrahend.  
 $11010 - 1101$
- c) Explain asynchronous mode of data transfer.  $5 + 5 + 5$
11. Write short notes on any *three* of the following :  $3 \times 5$
- a) Memory stack
  - b) Addressing modes
  - c) Program interrupt
  - d) Data dependency
  - e) Content Addressable Memory ( CAM ).
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