



**BHARATI VIDYAPEETH'S**

**INSTITUTE OF COMPUTER APPLICATIONS & MANAGEMENT (BVICAM)**

(Affiliated to Guru Gobind Singh Indraprastha University, Approved by AICTE, New Delhi)

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Course Code: MCA-107

Course Name: Computer Organization

**Class Test 2**

Time: 1 Hour

Max Marks: 20

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Q1 to Q10 carries 1 mark each

1. During the execution of the instructions, a copy of the instructions is placed in the \_\_\_\_\_
  - (a) Register
  - (b) RAM
  - (c) System heap
  - (d) Cache
2. When we use auto increment or auto decrements, which of the following is/are true?
  - 1) In both, the address is used to retrieve the operand and then the address gets altered
  - 2) In auto increment, the operand is retrieved first and then the address altered
  - 3) Both of them can be used on general purpose registers as well as memory locations
  - (a) 1, 2, 3
  - (b) 2
  - (c) 1, 3
  - (d) 2, 3
3. Which method/s of representation of numbers occupies a large amount of memory than others?
  - (a) Sign-magnitude
  - (b) 1's complement
  - (c) 2's complement
  - (d) 1's & 2's compliment
4. \_\_\_\_\_ method is used to map logical addresses of variable length onto physical memory.
  - (a) Paging
  - (b) Overlays
  - (c) Segmentation
  - (d) Paging with segmentation

5. The wrong statement/s regarding interrupts and subroutines among the following is/are \_\_\_\_\_
- i) The sub-routine and interrupts have a return statement
  - ii) Both of them alter the content of the PC
  - iii) Both are software oriented
  - iv) Both can be initiated by the user
- (a) i, ii and iv
  - (b) ii and iii
  - (c) iv
  - (d) iii and iv
6. The sub-routine service procedure is similar to that of the interrupt service routine in \_\_\_\_\_
- (a) Method of context switch
  - (b) Returning
  - (c) Process execution
  - (d) Method of context switch & Process execution
7. The technique whereby the DMA controller steals the access cycles of the processor to operate is called \_\_\_\_\_
- (a) Fast conning
  - (b) Memory Con
  - (c) Cycle stealing
  - (d) Memory stealing
8. When the processor receives the request from a device, it responds by sending \_\_\_\_\_
- (a) Acknowledge signal
  - (b) BUS grant signal
  - (c) Response signal
  - (d) None of the mentioned
9. The Master strobes the slave at the end of each clock cycle in Synchronous BUS.
- (a) True
  - (b) False
10. The bootstrap program is stored in:
- (a) RAM
  - (b) EEPROM
  - (c) ROM
  - (d) Both b & c
11. Implement the Following Function using  $8 \times 1$  MUX : (5 Marks)

$F(A,B,C,D) = \Sigma(2,3,6,7,8,9,10,11)$  Draw the Circuit Diagram for the same.

12. A two word instruction is stored at an address designated by the symbol W. The 4 Address field is designated by Y. The operand used during execution of instruction is stored At Z. An Index Register contains the value of X. Calculate the address using
- a) Direct mode
  - b) Immediate Mode
  - c) Relative
  - d) Indexed Mode

(5 Marks)