BACHELOR OF COMPUTER APPLICATION
SECOND SEMESTER
COMPUTER ORGANIZATION
BCA-202
[USE OMR SHEET FOR OBJECTIVE PART]

SET A

Duration: 3 hrs.

Full Marks: 70

[**Objective**]

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1×20=20

1. The Carry Flag is set when the_____ position bit is 1.
   - a. Zero
   - b. Fourth
   - c. Seventh
   - d. Eight

2. How many select lines would be required for an 8 : 1 MUX?
   - a. 2
   - b. 4
   - c. 8
   - d. 3

3. Number of AND gate required to construct a full adder circuit using two half adder is:
   - a. 2
   - b. 3
   - c. 5
   - d. 4

4. Which of the following is responsible for arithmetic and logic operations?
   - a. ALU
   - b. Memory
   - c. Control Unit
   - d. All the above

5. CPU consists of:
   - a. ALU & Memory
   - b. ALU & Control Unit
   - c. Control Unit & Memory
   - d. All the above

6. Program Counter (PC) is register used to_____.
   - a. Count number of instruction
   - b. Store the result after execution
   - c. Store the address of next instruction
   - d. Store the address of previous instruction

7. Size of Address Register(AR) in a basic computer is_____.
   - a. 8 bits
   - b. 12 bits
   - c. 16 bits
   - d. 32 bits

8. In 8-bit microprocessor, how many opcodes are possible?
   - a. 246
   - b. 278
   - c. 250
   - d. 256

9. Which of the following is unidirectional?
   - a. Address bus
   - b. Data bus
   - c. Both a & b
   - d. None

10. Hit ratio is a term used to measure_____ of a computer.
    - a. Speed
    - b. Memory Capacity
    - c. Accuracy
    - d. Performance

11. During a write operation if the required block is not present in the cache then_____ occurs.
   a. Write miss
   b. Write latency
   c. Write hit
   d. Write delay

12. The bit used to indicate whether the block was recently used or not is_____.
   a. Reference bit
   b. Dirty bit
   c. Control bit
   d. Idol bit

13. Which one of the following is not a valid classification of Computer Architecture?
   a. SISD
   b. MISD
   c. DISD
   d. MIMD

14. In RAID technology, Striping technology is used in_____.
   a. Level 0
   b. Level 1
   c. Level 3
   d. Level 6

15. In the client server model of the cluster _____ approach is used.
   a. Load configuration
   b. FIFO
   c. Bankers algorithm
   d. Round robin

16. The CISC stands for_____
   a. Computer Instruction Set Compliment
   b. Complete Instruction Set Compliment
   c. Computer Indexed Set Components
   d. Complex Instruction set computer

17. The iconic feature of the RISC machine among the following is_____.
   a. Reduced number of addressing modes
   b. Increased memory size
   c. Having a branch delay slot
   d. All of the mentioned

18. Pipe-lining is a unique feature of_____.
   a. RISC
   b. CISC
   c. ISA
   d. IANA

19. Two level memory is a principle known as_____.
   a. Direct Memory Access
   b. Associative memory
   c. Locality of Reference
   d. Virtual memory

20. The multiplier is stored in_____.
   a. PC Register
   b. Shift register
   c. Cache
   d. None of the mentioned

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(Descriptive)

[Answer question no.1 & any four (4) from the rest]

1. Explain with the help of block diagram of Pin Configuration of the 8085   10
   microprocessor architecture.

2. a) Explain Edge Triggered Flip Flop with block diagram.   5+5=10
   b) What is micro-program? Write down three examples of Logic and
      Shift micro-operations.

3. a) Given A= 10110   B= 10010 , then compute A x B with suitable   5+5=10
      algorithm.
   b) What is interrupt signal? What are different interrupt signal
      available? Explain.

4. a) What is control word? Explain with example how a computer   5+5=10
      executes instructions with relevance to control word.
   b) Write an Assembly program to add two numbers.

5. a) Explain briefly about the functionality of 8089 IOP.   5+5=10
   b) What is peripheral? Write down the role on interface unit in IO
      devices.

6. List 10 instructions from the instruction set supported by 8085   10
   microprocessor with their syntax and purposes.

7. a) What is pipeline processing? Explain with a suitable example.   5+5=10
   b) Realize a Full adder using two Half adder circuits.

8. Write short notes on: (any two)   5+5=10
   a) Infiniband
   b) Firewire
   c) Superscaller processor

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