(6 pages)

Reg. No. : ....

Code No. : 10515 E   Sub. Code : CSCS 41

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2024.

Fourth Semester

Computer Science

Skill Based Subject – COMPUTER ARCHITECTURE

(For those who joined in July 2021-2022)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following computer memory is fastest?

   (a) Register   (b) Hard disk

   (c) RAM   (d) None of the above

2. Which of the following format is used to store data?

   (a) Decimal   (b) Octal

   (c) BCD   (d) Hexadecimal

3. Computer address bus is ————

   (a) Multidirectional (b) Bidirectional

   (c) Unidirectional   (d) None of the above

4. In ———— the operand is specified in the instruction itself.

   (a) Immediate addressing

   (b) Register mode

   (c) Implied addressing

   (d) Register Indirect

5. The booth algorithm is a multiplication algorithm that allows us to multiply the two signed binary integers in ————, respectively.

   (a) 2's complement   (b) 1's complement

   (c) 0's complement   (d) none of these

6. What is the 2s complement of 13?

   (a) 1111 00110   (b) 0111 0011

   (c) 1111 0011   (d) 1111 0001

7. Which of the following provides input interface?

   (a) Mouse   (b) Keyboard

   (c) Scanner   (d) All of these

8. DMA stands for ————

   (a) Direct Memory Access

   (b) Dial Memory Access

   (c) Direct More Access

   (d) None of these

9. When power is switched off which memory loses its data?

   (a) Non-Volatile Memory

   (b) Volatile Memory

   (c) Both (a) and (b)

   (d) None of the above

10. Which of the following is correct example for Auxiliary Memory?

    (a) Magnetic disks   (b) Tapes

    (c) Flash memory   (d) Both (a) and (b)

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is Instruction codes?

    Or

    (b) Explain Index Register in Computer.

12. (a) How the stack used in computer memory?

    Or

    (b) Discuss any one Addressing mode.

13. (a) Explain addition two 2's complement nos.

    Or

    (b) What you mean floating point arithmetic number? Explain.

14. (a) Explain Input Interface with neat figure.

    Or

    (b) How the Output Interface are works in Computer System?

15. (a) What are the memory hierarchy?

Or

(b) Define Auxiliary Memory.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain the following

(i) Computer Instruction

(ii) Instruction cycle

Or

(b) Discuss about addressing sequencing.

17. (a) Write about the Instruction formats.

Or

(b) How data transfer and manipulate?

18. (a) Discuss about BOOTH multiplication algorithms.

Or

(b) How to divide two 2's complement number? Give example.

19. (a) Explain in details about Asynchronous data transfer.

Or

(b) Discuss in details about DMA.

20. (a) What is the use of cache memory? Explain.

Or

(b) Draw virtual memory concept diagram and explain.

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