(6 pages)

Reg. No. : .....

Code No. : 10470 E **Sub. Code : CSCS 41**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

Fourth Semester

Computer Science

Skill Based Subject — COMPUTER ARCHITECTURE

(For those who joined in July 2021 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A sequence of microinstructions constitutes a _____

(a) System Program
(b) Micro Programming
(c) Memory Program
(d) Macro Programming

2. In the _____ organization, the control logic is implemented with gates, flip-flops, decoders, and other digital circuits.

(a) Microprogrammed
(b) Micro Controlled
(c) Hardwired
(d) System controlled

3. The _____ provides arithmetic and logic operations. In addition, the CPU must provide shift operations.

(a) ALU
(b) Control word
(c) Stack
(d) Stack Pointers

4. _____ Mnemonic Stands for Branch If Zero.

(a) BIZ (b) BZ
(c) BIZO (d) BNZ

5. _____ algorithm gives a procedure for multiplying binary integers in signed-2's complement representation.

(a) Array Multipler (b) Cubicle
(c) Booth (d) Stall

6. ———— provide a permanent record on paper of computer output data or text.

(a) Scanner (b) Printer

(c) Monitor (d) Keyboard

7. The ASCII code contains ———— characters that can be printed.

(a) 95 (b) 94

(c) 96 (d) 97

8. A ———— command is issued to activate the peripheral and to inform it what to do.

(a) Status (b) Control

(c) I/O (d) Output

9. The ———— memory is employed in computer systems to compensate for the speed differential between main memory access time and processor logic.

(a) Main (b) Cache

(c) Auxiliary (d) Associative

10. A memory unit accessed by content is called

(a) CMA (b) DMA

(c) CAM (d) DAM

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write Short notes on Operation Code.

Or

(b) Discuss about Hardwired Control and Micro Programmed Control.

12. (a) Discuss about Control Word.

Or

(b) Write short notes on Arithmetic Instructions.

13. (a) What is Divide Overflow? Explain.

Or

(b) State the notes on Register Configuration for Floating point Operations.

14. (a) Write Short notes on CRT.

Or

(b) Discuss I/O Interface Commands.

15. (a) Write short notes on Memory Hierarchy.

Or

(b) Draw the Block diagram of associative memory.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) List out and explain the various Computer Instructions.

Or

(b) Discuss about Address Sequencing.

17. (a) Describe the Stack Organization.

Or

(b) Discuss about Program Control Instructions.

18. (a) Draw Flowchart for multiply operation.

Or

(b) Write detail notes on Floating Point Multiplication with suitable example.

19. (a) Discuss about Asynchronous Data Transfer.

Or

(b) Draw the Circuit diagram of 4 × 4 FIFO buffer.

20. (a) Discuss about Main Memory.

Or

(b) Write detail notes on Virtual Memory.

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