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Reg. No. : .....

**Code No. : 10543 E      Sub. Code : CSCA 41**

B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2024.

Fourth Semester

Computer Application

Skill Based Subject – MICROPROCESSOR

(For those who joined in July 2021-2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1. The timing of the communication process in microprocessor is controlled by the group of circuit called the  
(a) Memory unit      (b) Control unit  
(c) Arithmetic unit      (d) Logic unit
2. Move B, A save the first byte in  
(a) A      (b) B  
(c) Both A and B      (d) All of the above

3. The number of bits stored in a register is called a  
(a) Address bit      (b) Register word  
(c) Storage byte      (d) Memory word
4. ALE is termed as  
(a) Arithmetic and Logic Encoder  
(b) Arithmetic and Logic Extension  
(c) Address Latch Enable  
(d) Address Latch Encoder
5. DCR is a ——— instruction.  
(a) 1 bit      (b) 2 bit  
(c) 1 byte      (d) 2 byte
6. Each bit is shifted to the adjacent left position and bit D<sub>7</sub> becomes D<sub>0</sub> by.  
(a) RAL      (b) RLC  
(c) RRC      (d) RAR
7. ——— are used primarily to keep track of events.  
(a) Registers      (b) Accumulators  
(c) Counters      (d) Loops

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8. What technique is used to avoid repetition of the same delay instructions

- (a) RET (b) CALL  
(c) Counter (d) Subroutine

9. Which subroutine helps to subtract two 16-bit numbers

LXI D, 2050H

LXI H, 2080H

MVI B, 05H

NEXT: CALL SBTRAC

- (a) LXI D (b) LXI H  
(c) SBTRAC (d) NEXT

10. The addition of 34<sub>BCD</sub> to 26<sub>BCD</sub> results in

- (a) 5AH (b) 3AH  
(c) 4AH (d) AH

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) How will you consider microprocessor as a CPU-explain.

Or

(b) Explain in detail about 8085 programming model.

12. (a) Distinguish between Memory-Mapped I/O and I/O Mapped.

Or

(b) Explain the interfacing circuit required to interface EPROM chip with neat sketch.

13. (a) What is a flowchart? Explain with example.

Or

(b) Illustrate conditional loop and counter using a flowchart.

14. (a) Explain time delay using one register.

Or

(b) Define subroutines with suitable illustrations.

15. (a) Subtract 48 from 82 using BCD subtraction.

Or

(b) How will you multiply two 8-bit unsigned numbers?





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 classification of computers in detail.

Or

- (b) How will you classify 8085 microprocessor instructions?

17. (a) Describe microprocessor architecture and its operations.

Or

- (b) Explain about control, status signals and externally initiated signals including interrupts in 8085 microprocessor.

18. (a) Explain in detail about the data transfer operations of 8085 microprocessor.

Or

- (b) Write all instructions related to incrementing or decrementing 16-bit contents in a register pair.

19. (a) Illustrate ZERO-TO-NINE modulo ten counter.

Or

- (b) Explain the way in which subroutines are used in 8085 microprocessor.

20. (a) Write a program for 2 digit BCD to binary conversion in 8085 microprocessor.

Or

- (b) Write a program for binary to unpacked BCD conversion in 8085 microprocessor.

