

(6 pages)

Reg. No. :

Code No. : 21039

Sub. Code : GMCA 4 A

B.C.A. (CBCS) DEGREE EXAMINATION, APRIL 2016.

Fourth Semester

Computer Applications — Main

Elective — MICROPROCESSOR

(For those who joined in July 2012 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The number of hardware interrupts that the processor 8085 consists of is
 - (a) 1
 - (b) 3
 - (c) 5
 - (d) 7
2. The assembler directives which are the hints using some predefined alphabetical strings are given to
 - (a) Processor
 - (b) Memory
 - (c) Assembler
 - (d) Processor and assembler

3. The interrupt-request line is a part of the
 - (a) Data line
 - (b) Control line
 - (c) Address line
 - (d) None of the above
4. The return address from the interrupt-service routine is stored on the
 - (a) System heap
 - (b) Processor register
 - (c) Processor stack
 - (d) Memory
5. The circuits in the 8085A that provide the arithmetic and logic functions are called the
 - (a) CPU
 - (b) ALU
 - (c) I/O
 - (d) None of the above
6. How many buses are connected as part of the 8085A microprocessor?
 - (a) 2
 - (b) 3
 - (c) 5
 - (d) 8

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7. What is the difference between a mnemonic code and machine code?

- (a) There is no difference
- (b) Machine codes are in binary, mnemonic codes are in shorthand English
- (c) Machine codes are in shorthand English, mnemonic codes are in binary
- (d) None of the above

8. Stack pointer is initialized with the instruction

- (a) PUSH (b) LXI
- (c) RET (d) Pop

9. CALL BCD7SEG

- (a) BCD7SEG is OP CODE
- (b) CALL is subroutine
- (c) BCD7SEG is subroutine
- (d) none of them

10. What is the output of the following code
AL= 00110100 BL= 00111000 ADD AL, BLAAA

- (a) AL = 6CH (b) 12H
- (c) 12 (d) C6H10

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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 note on 8085/8080A machine language.

Or

(b) Explain the difference between a compiler and an interpreter.

12. (a) Write short notes on Encoder with an example.

Or

(b) Explain about the buffer.

13. (a) Write an 8085 assembly language program to add N elements.

Or

(b) Write a program using the ADI instruction to ADD the two hexadecimal numbers 3AH and 48H.

14. (a) Write short notes on time delay using one register.

Or

(b) Calculate the total delay in LOOP2 inclusive of LOOP1 if the byte in register B= 0AH.

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[P.T.O.]



15. (a) Write a note on binary to BCD conversion.

Or

- (b) Give an example of BCD addition and explain.

PART C — ($5 \times 8 = 40$ marks)

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

Each answer should not exceed 600 words.

16. (a) Explain the about the microprocessor and a micro computer with an example.

Or

- (b) Discuss about the function of each component of a computer. Give example.

17. (a) Explain about the control bus with an example.

Or

- (b) Discuss about the internal data operation and the 8085/8088A register.

18. (a) Discuss about the 8085 Arithmetic operation and its types. Give an example.

Or

- (b) Discuss dynamic debugging in detail.

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19. (a) Discuss debugging counters in detail.

Or

- (b) Explain about the subroutine with an example.

20. (a) Explain about the multiplication of two 8-bit using a numbers.

Or

- (b) Discuss 16 bit data transfer (copy) and data exchange group.
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