D 50643 (Pages : 2) Name.....

Reg. No.....

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS—UG)

B.C.A.

BCA 5B 12—MICROPROCESSOR AND APPLICATIONS

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carries 1 mark.

1. An ———— is a computer program that translates an assembly language program from mnemonics to binary machine code.
2. In 8086 microprocessor, the arithmetic and logic instructions take place in ————.
3. ———— mode is suitable for system having multiple processors.
4. The expansion of BIU is ————.
5. In 8086, clock signal is provided through pin number ————.
6. In ———— addressing mode, the operands offset address is found by adding the contents of SI or DI register and 8-bit/16-bit displacements.
7. ———— is the instruction used to repeat the given instruction till CX ≠ 0.
8. The ———— directive is used to give a specific name to each assembly module when programs consisting of several modules are written.
9. The ———— directive is put after the last statement of a program to tell the assembler that this is the end of the program module.
10. DMA stands for ————.

(10 × 1 = 10 marks)

Part B

Answer **all** *questions.*
Each question carries 2 marks.

11. What is a flag register ?
12. What is the purpose of zero flag and sign flag in 8086 ?
13. What is a stack pointer register ?

Turn over

14. What is the function of data segment in segment register ?

15. What is the function of READY pin in 8086 ?

(5 × 2 = 10 marks)

Part C

Answer any **five** *questions.*
Each question carries 4 *marks.*

16. Explain control flags used in 8086.

17. Explain Instruction Queue in 8086.

18. What is HOLD and HLDA ?

19. Explain direct addressing mode and register indirect addressing modes of 8086 with examples.

20. Write short notes on Basic Input Output System (BIOS).

21. What are DOS interrupts ?

22. What is key debouncing ?

23. Draw the architecture diagram for DMA.

(5 × 4 = 20 marks)

Part D

Answer any **five** *questions.*
Each question carries 8 *marks.*

24. Explain various general purpose registers used in 8086.

25. Explain different arithmetic instructions of 8086 microprocessor.

26. Explain software interrupts in 8086 microprocessor.

27. Explain DD and DQ assembly directives.

28. Describe macro definition with an example.

29. Explain Programmable Communication Device (8251A).

30. Write short notes on 80286 microprocessor.

31. Write short notes on Pentium processors.

(5 × 8 = 40 marks)