K25U 3030

Reg. No. : .....

Name : .....

NAVAJYOTHI COLLEGE KANNUR DT. 670511 POST BAG No. 5. CHERUPUZHA

III Semester B.C.A. Degree (C.B.C.S.S. – O.B.E. – Supplementary/ Improvement) Examination, November 2025
(2019 to 2023 Admissions)
CORE COURSE
3B06BCA : Introduction to Microprocessors

Time : 3 Hours

Max. Marks : 40

PART – A
(Short Answer)

Answer **all** questions. **(6×1=6)**

1. What is pipelining ?
2. Name the flag that sets if the result is negative.
3. Specify the use of the 8086 assembly language directive, ASSUME.
4. What is meant by far procedure ?
5. What is a stack frame ?
6. What is the use of the LEAVE command in stack frame management ?

PART – B
(Short Essay)

Answer **any 6** questions. **(6×2=12)**

7. What are the functions of the arithmetic logic unit ?
8. Describe the function of the accumulater in the 8085.
9. How does an instruction queue contribute to improved performance ?
10. Describe the following 8086 assembly language instructions :
    CALL and RET.

P.T.O.

11. Explain the effect on the carry flag when a shift operation is performed.

12. What is the significance of interrupts in program execution ?

13. What are the various modes of DMA ?

14. What is the purpose of the interrupt mask register in the 8259A ?

PART – C
(Essay)

Answer **any 4** questions. **(4×3=12)**

15. Write the steps involved in the execution of a simple instruction.

16. Explain the purpose and functionality of the segment registers in the 8086.

17. Describe the addressing modes available in the 8086. Provide examples to illustrate each mode.

18. Write an 8086 assembly language program to find the largest number in an array of 1016-bit numbers stored in memory. Store the result in a variable named 'LARGEST'.

19. How does the processor handle multiple simultaneous interrupts ?

20. Describe the benefits and drawbacks of the programmed I/O method.

PART – D
(Long Essay)

Answer **any 2** questions. **(2×5=10)**

21. What are the flag registers in the 8085, and what do they indicate ?

22. List and briefly explain the function of the general-purpose registers in the 8086.

23. Explain the stack structure in the 8086 microprocessor and its significance in program execution.

24. Describe the main features of the Intel 8255 programmable peripheral interface.