Reg. No. : ....

Name : ....

Third Semester B.Sc. Degree Examination, October 2022

First Degree Programme Under CSS

SDE

Computer Science

Core Course

CS 1345 : MICROPROCESSORS AND PERIPHERALS

(2017 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A (Very short answer type)

Answer **all** questions in **one** word to maximum of **one** sentence.

1. What is the bit size of 8086 microprocessor?

2. How many address lines are there in 8086 microprocessor?

3. Define instruction cycle.

4. What is stack?

5. Which instruction is used to exchange the data from two locations?

6. What is linking process?

7. Define interrupts.

8. Expand the term BIOS.

9. Give any two examples of computer viruses.

10. What is the use of INTR signal?

SECTION – B (Short Answer)

Not exceeding **one** paragraph, answer any **eight** questions. Each question carries **2** marks.

11. What is the use of AX register?

12. What is VRAM?

13. Describe fetch-decode-execute cycle?

14. What is the decimal equivalent of the hexadecimal number $(3C5)_{16}$?

15. Why do you use the instruction DAA? Give example.

16. Write notes on the instructions ADC and NPG.

17. What are procedures in 8086 microprocessor?

18. Give an outline about DOS interrupts.

19. What are COM files used for?

20. Why is DMA important?

21. What is T-state?

22. Briefly explain about ALE.

(8 × 2 = 16 Marks)

P – 2057

SECTION – C (Short Essay)

Not exceeding **120** words, answer any **six** questions. Each question carries **4** marks.

23. What are the features of RAM?

24. Briefly explain flag registers in 8086 microprocessor.

25. Write a note on segment offset addressing in 8086 microprocessor.

26. Describe various instructions to perform logical operation in 8086 microprocessor.

27. Write note on assembler directives in 8086 microprocessors.

28. What are the differences between extended memory and expandable memory?

29. Write a short note on event counters.

30. How do you interface 8279 keyboard and display controller with 8086 microprocessors?

31. Write a program in 8086 microprocessor to find out the subtraction of two 8-bit BCD numbers.

(6 × 4 = 24 Marks)

SECTION – D (Long Essay)

Answer **any two** questions. **Each** question carries **15** marks.

32. Explain the internal architecture of Intel 8086 in detail.

33. What are the different addressing modes in 8086 microprocessor? Explain with examples.

34. Describe interrupt vector table on 8086 in detail with the help of a block diagram.

35. Explain the following:

    (a) interfacing memory

    (b) interfacing I/O devices.

(2 × 15 = 30 Marks)