

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)

Chromepet, Chennai - 600 044.

M.Sc. Physics - END SEMESTER EXAMINATIONS APRIL - 2024

SEMESTER -IV

22PPHET4004 - Microprocessor and Basics of Embedded System

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Describe the 8086-pipeline process in detail.
2. With a neat sketch describe the key features of the 8051 microcontroller.
3. Write an assembly language program for performing arithmetic operations in 8051.
4. Briefly explain the concept of an embedded system.
5. Explain shift and rotate instructions of 8086 with examples.
6. Classify the 8 and 16-bit microcontroller families.
7. Write an assembly language program for performing sorting in 8051.
8. Distinguish 8086 microprocessor and 8051 microcontroller.

Section C

I - Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Describe the architecture of 8086 with neat diagram.
10. Explain the interrupt types available in 8086 with their priority levels and specify the action when an interrupt is executed.
11. How does 8051 differentiate between external and internal memory? Explain with a neat block diagram.
12. Write an assembly language program for performing logic operations in 8051.

II - Compulsory question ($1 \times 10 = 10$ Marks)

13. Explain the addressing modes of 8051 with examples.
