

**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. - END SEMESTER EXAMINATIONS APRIL - 2022

SEMESTER - IV

20PPHET4004 - Microprocessor 8086 and Microcontroller 8051

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. Describe the working of DMA controller with necessary block diagram.
2. Examine the mode - 0 of intel 8253.
3. Compare Min Mode and Max Mode of 8086 microprocessor.
4. Classify and explain types of interrupts of 8086 microprocessor briefly.
5. Illustrate different types of addressing modes of 8086 microprocessor.
6. Ascertain the output of jump instruction of 8086 microprocessor with examples.
7. Write an assembly language programme (8051 Micro controller) for addition and multiplication of two numbers.
8. Explain external memory briefly.

Section B

Part A

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

9. Describe the block diagram of programmable peripheral interface.
Discuss its various modes.
10. Sketch the block diagram of 8086 microprocessor architecture and explain in detail.
11. Prepare the list of instruction set of 8086 microprocessor and explain them with example.
12. Write an assembly language program to find factorial of a given number using 8051 Micro controller instruction sets.

Part B

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

13. Compare the I/O instructions which are used to access the I/O ports and also explain the different methods of interfacing of I/O to microprocessor.
