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.
B.Sc.Physics - END SEMESTER EXAMINATIONS - NOV'2024
SEMESTER - V
24UPHET5A01 - Digital Data Processing and Embedded Microcontrollers

Total Duration : 2 Hrs.30 Mins. Total Marks : 60

Section B

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

1. Explain 8085 Microprocessor Architecture with neat diagram.

2. Briefly explain the addressing modes of 8085 microprocessor.

3. Write 8085 microprocessor assembly language program to multiply two 8-bit binary number

4. Write 8085 assembly language program to perform addition of two hexadecimal numbers that are stored in memory. Also store the answer in the memory address.

5. Differentiate direct I/O and memory mapped I/O of 8085 microprocessor.

6. Draw and explain the block diagram of 8255A Programmable Peripheral interface.

7. Explain the steps involved in performing 8085 interrupt process.

8. What is IoT? Explain the characteristics of IoT.

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks$)$

9. Explain data transfer and arithmetic instructions of 8085 instruction set with proper examples.

10. Write 8085 assembly language program to arrange the given array of numbers in descending order.

11. Design a microprocessor system for the 8085 microprocessor such that it should contain 2Kx8 EPROM and 2kx8 RAM.

12. With a neat circuit diagram explain interfacing of LED to 8085

13. Elucidate in detail about how the IoT based system is used to monitor the water quality.

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