

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.Computer Science - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - I

**22UCSCT1002 - Fundamentals of Digital Computer and Microprocessor**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

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

1. Convert the following:
  - (i) (1010.011) binary to decimal.
  - (ii) (306.D) hexadecimal to binary.
2. Explain the working of Multiplexers.
3. Write the features of Assembly language.
4. What is Hardware interrupt? Give any two reasons for hardware interrupt.
5. Compare 1's complement and 2's complement? Write procedure of subtraction with (r-1)'s Complement.
6. Describe the functioning of SR flip-flop.
7. List out the pins in 8085 Microprocessor and discuss its functions.
8. Give an overview on push and pop operations of a stack.

### Section C

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

9. Describe the different types of Logic gates and its functions using truth tables.
10. Exemplify the functioning of Half-adder and Full-adder with neat diagram.
11. Elaborate on the 8085 Microprocessor architecture and its operations.
12. Elucidate the different types of Addressing modes.
13. Discuss on I/O interface.

\*\*\*\*\*