2019

Part – II

COMPUTER SCIENCE

(Honours)

Paper – V

(Practical)

(Set – II)

Full Marks – 50

Time : 4 Hours

The figures in the right-hand margin indicate marks.
Candidates are required to give their answers in
their own words as far as practicable.

Unit – II

GROUP – A

(Digital Electronics)   20×1

Answer any **one** question on lottery basis :

1. Design a circuit that verifies if associative rule holds for NAND gates.

2. Design a 3×8 decoder using NAND gates.

3. Design a 8×1 MUX using NOR gates.

P.T.O.

4. Design a code coverter circuit that converts a 4-bit binary number to 5 - bit Excess-3 code.

5. Design a S-R flip-flop using NAND gates.

6. Design a J–K flip flop using NOR gats.

7. Design a MOD - 12 counter.

8. Design a 4-bit circular left shift register.

9. Design a parity bit generator circular for 4-bit number.

10. Design a T flip flop using NAND gates.

GROUP – B
[Microprocessor & Interfacing]
Microprocessor

Answer any **one** question on lottery basis : 12×1

1. Write an 8085 ALP to add two 16 - bit numbers.

2. Write an 8085 ALP to subtract two 16 - bit numbers.

3. Write an 8085 ALP to move a memory block from $F000_H$ - $F009_H$ to $F100_H$ - $F109_H$.

4. Write an 8085 ALP to find minimun of three numbers.

5. write an 8085 ALP to initiate memory location $F100_H$ - $F131_H$ with the data FF_H.

6. Write an 8085 ALP to find Gray code of the 8-bit number of B-register.

7. Write an 8085 ALP to search for $2C_H$ in the memory locations $F200_H$ - $F220_H$. Display the memory locations for successful search.

8. Write an 8085 ALP to find number of 1's in D register. Display your result.

Interfacing using 8255   8×1

1. Write an 8085 ALP to diplay "COSH".

2. Write an 8085 ALP to display "2019".

3. Write an 8085 ALP to generate and display a square wave.

4. Write an 8085 ALP to display "LAB".

Viva-voce : 5 marks

Practical Note book : 5 marks