NEW

Part II 3-Tier

2017

COMPUTER SCIENCE

(Honours)

PAPER—V (Set-II)

(PRACTICAL)

Full Marks : 50

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Answer any *one* questions taking *one* from each Group (Lottery Basis).

Unit – II

Group—A

(*Digital Electronics*)

1×20

1. Design a circuit convert BCD numbers to corresponding gray codes and verify its truth table.

2. Design and implement a full subtractor using recoders and verify its truth table.

3. Design and parity generator circuit using basic gates and verify its truth table.

(Turn Over)

4. Design a magnitude comparator using universal gates and verify its truth table.

5. Design and implement a 4 bit shift register using JK flip-flop.

6. Design a MOD 10 counter using JK master slave flip-flop and verify its truth table.

7. Design and implement a synchronous counter (4 bit) using JK master slave flip-flop.

8. Design and implement 4 bit synchronous counter using JK master slave flip-flop.

9. Design and implement a serial adder using flip-flops.

10. Design and implement a 4 bit register (PIPO, PISO) using JK flip-flop.

Group—B

(*Microprocessor and Interfacing*)

Microprocessor

Answer any *one* question (*lottery basis*) :   1×12

1. Write an assembly language program to move 20 data (8 bit) from one memory location to another memory location.

2. Write an 8085 program to find all negative number in a set of data and add them. Result will be store in memory location.

3. Write an assebly language program to seperate even number and add them from a series of numbers. Result will be store in some memory location.

4. Write an ALP to sort 15 numbers (8 bit) from some memory location in descending order.

5. Write an ALP to generate 10 Fibonacci number from 02H to FFH.

6. Write an ALP to find the highest and lowest number from a list of byte and add them.

7. Write an ALP to add on by all positive numbers from a list of byte.

8. Write an ALP to convert a number from binary to BCD.

Interfacing using 8255

Answer any *one* question (*lottery basis*) :   1×8

1. Write an ALP to display "VU123H". Using seven segment displays.

2. Write an ALP to interface 7 segment display with 8085 using 8285 to display "INTERFACE".

3. Write an ALP to generate a square wave through 8255 port.

4. Write an ALP to scroll a letter 'U' through 7 segment.

Viva Voce : 5

Practical Note Book : 5

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