5256/MPB/PPHY06 NOVEMBER 2018

DIGITAL ELECTRONICS AND MICROPROCESSORS

Time : Three hours Maximum : 100 marks

Answer ALL questions.

Each question carries equal marks.

$(5 \times 20 = 100)$

1. (a) Use complement s to subtract $(72532-3250)_{10}, (3610-54876)_{10}$, $(1010100-1000100)_2$ and $(1000100-1110100)_2$. Do the same using $(r-1)'s$ complement.

Or

(b) Draw logic circuits for $F=(AB+CD+E)'$ and $F=[(A+B)(C+D)E]'$ using AND-OR-INVERT and OR-AND-INVERT implementations respectively.

2. (a) Explain the working of clocked $R-S$ and T flip flops.

Or

(b) Explain the working of a Binary Up-Down counter.

3. (a) Give an account on instruction set and instruction format.

Or

(b) Write a program to count from 0 to 9 with a one second delay between each count.

4. (a) Write a program for converting Binary to ASCII Hex code.

Or

(b) Write an essay on Assemblers.

5. (a) Give a detailed account on Architecture and programming of 8085.

Or

(b) Draw the TTY interfacing circuit for Data reception and its program.