* Explain how complement number system is useful in computer system. Discuss any one complement number system with example.
* Define RTL. Explain how register transfer takes place in basic computer system
* What is a micro operation? List and explain its categories.
* What do you mean by register transfer? Explain in detail. Also discuss three-state bus buffer.
* Explain addition and subtraction operations with signed 2’s complement integer data. Support your answer by taking appropriate example(s).
* Explain selective set, selective complement and selective clear
* Show the block diagram of the hardware that implements the following register transfer statement .

T2: R2 - R1 , R1 – R2

* A digital computer has a common bus system for 16 registers of 32 bits each.

How many selection input are there in each multiplexer?

What size of multiplexers are needed?

How many multiplexers are there in a bus?

* Explain 4 bit incrementer with a necessary diagram
* Show the hardware that implements the following statement. Include the logic gates for the control function and a block diagram for the binary counter with a count enable input.

xyT0 + T1 + y’T2: AR 🡨AR + 1