

Assignment -1 (Verilog based): Will not be treated under marks. Only practice

1. Write the code of following programme
 - a. Six basic gates with n input operation
 - b. 4 bit full adder
 - c. 4 Bit Adder Subtractor
 - d. Carry look ahead adder.
 - e. Parity Generator and checker
 - f. 4 Bit magnitude comparator
2. Write the code of MSI logic like (choose appropriate programming process)
 - a. 4 bit , 8 bit , 16 bit MUX
 - b. 4 bit , 8 bit , 16 bit De-MUX
 - c. 16 bit MUX using MUX tree
 - d. 64 bit MUX using MUX tree
 - e. Full adder using MUX
 - f. 3-8 Decoder
 - g. BCD encoder
 - h. BCD to Excess three converter using Decoder
 - i. BCD to Grey code converter using Decoder
 - j. Priority Encoder
3. Write the code for following sequential logic
 - a. J-K , D and T flipflop
 - b. Pulse generator
 - c. 3 bit up down ripple counter
 - d. 3 bit ring counter
 - e. 3 bit Shift right-left register (choose clock as per req)
 - f. Mod 2, Mod 5, Mod 10 counter
 - g. 4-bit Unsigned Up Counter with Asynchronous Clear
4. Write code for 16 word 8 bit RAM
5. Write a code for Mealy Machine
6. Write a code for Moore Machine
7. Write test bench for following
 - a. Mealy Machine
 - b. Moore Machine
 - c. 16 bit MUX tree
 - d. Ring counter
 - e. 4 bit Parallel adder
 - f. n bit Ex-or
8. Write a code for Dual-Port RAM with Asynchronous Read