

- 1) Design and implement the Full adder by using the Half adder
- 2) Implement Excess-3 code
- 3) Design logic gates using Universal gates(NAND and NOR)
- 4) Design a 3 input circuit which tells whether input is odd or even.(Hint: take 3 inputs, 2 outputs)
- 5) Using XOR gate prepare OR gate.
- 6) Design a logic circuit that allow input signal a that connect through to the output only when control input b is low only and control input c is high otherwise output should be low.
- 7) Design a combinational circuit that takes 4bit input x, if x is even output is  $x+1$  else output= $x-1$ .