## 36 Lecture - CS302

## Important Mcqs

1. What is a 3-bit up/down counter?
a) A digital clock that counts up to 3
b) An electronic circuit that counts up or down in binary from 0 to 7
c) An analog circuit that counts up or down in decimal from 0 to 3
d) A device that counts the number of bits in a data stream

Answer: b) An electronic circuit that counts up or down in binary from 0 to 7

## How many flip-flops are there in a 3-bit up/down counter?

a) 1
b) 2
c) 3
d) 4

Answer: c) 3
What controls the counting direction in a 3-bit up/down counter?
a) The clock signal
b) The reset signal
c) The input signal
d) The control input

Answer: d) The control input
What is the maximum count value of a 3-bit up/down counter?
a) 3
b) 7
c) 8
d) 10

Answer: b) 7
What happens when the 3-bit up/down counter reaches its maximum value?
a) It stops counting
b) It resets to zero and continues counting up
c) It resets to zero and continues counting down
d) It switches to counting down

Answer: c) It resets to zero and continues counting down
What is the minimum count value of a 3-bit up/down counter?
a) 0
b) 1
c) 6
d) 7

Answer: a) 0
What type of electronics commonly uses a 3-bit up/down counter?
a) Analog circuits
b) Digital circuits
c) Audio circuits
d) Power circuits

Answer: b) Digital circuits
What is the function of the logic gates in a 3-bit up/down counter?
a) To store binary values
b) To control the counting direction
c) To generate the clock signal
d) To amplify the signal

Answer: b) To control the counting direction
What is the purpose of the control input in a 3-bit up/down counter?
a) To reset the counter
b) To control the clock frequency
c) To select the counting direction
d) To set the count value

Answer: c) To select the counting direction
What is the binary representation of the number 5 in a 3-bit up/down counter?
a) 001
b) 010
c) 101
d) 111

Answer: c) 101

