14 Lecture - CS302

Important Mcqs

1. **Which logic gate is typically used in the implementation of an odd-parity generator circuit?**
   a) NOT gate
   b) XOR gate
   c) OR gate
   d) AND gate
   Answer: b

2. **What is the purpose of an odd-parity generator circuit?**
   a) To generate random numbers
   b) To generate a parity bit based on the input data
   c) To add noise to the data signal
   d) To compress the data signal
   Answer: b

3. **In an odd-parity generator circuit, the parity bit is set to 1 if:**
   a) The number of 0's in the data input is even
   b) The number of 0's in the data input is odd
   c) The number of 1's in the data input is even
   d) The number of 1's in the data input is odd
   Answer: c

4. **How many input bits are required for an odd-parity generator circuit to generate a single parity bit?**
   a) 1
   b) 2
   c) 3
   d) 4
   Answer: 1

5. **Which of the following represents the output of an odd-parity generator circuit for the input 10101?**
   a) 101010
   b) 101011
   c) 101000
   d) 101001
   Answer: b

6. **In an odd-parity generator circuit, what is the output when the input has an odd number of 1's?**
   a) 0
   b) 1
   c) Depends on the specific circuit implementation
   d) Cannot be determined

Answer: b

7. **Which of the following is a disadvantage of using an odd-parity generator circuit?**
   a) It requires additional hardware to implement
   b) It can only detect single-bit errors
   c) It slows down the data transmission speed
   d) It increases the complexity of the system
   Answer: a

8. **Which logic gate can be used to implement an odd-parity checker circuit?**
   a) OR gate
   b) XOR gate
   c) AND gate
   d) NAND gate
   Answer: b

9. **Which of the following is a valid input for an odd-parity generator circuit?**
   a) 01010
   b) 11000
   c) 11111
   d) 00000
   Answer: b

10. **What is the function of a parity bit in digital communication systems?**
    a) To add noise to the data signal
    b) To compress the data signal
    c) To verify the accuracy of the transmitted data
    d) To increase the complexity of the system
    Answer: c