13 Lecture - CS302

Important Mcqs

1.	Which Boolean logic gate is typically used to detect odd numbers? A) AND B) OR C) NOT D) XOR Answer: D (XOR)
2.	Which of the following is a prime number? A) 4 B) 5 C) 6 D) 8 Answer: B (5)
3.	What is the output of an odd-prime number detector if the input is 2? A) High B) Low C) Undefined D) Depends on the circuit design Answer: B (Low)
4.	What is the output of an odd-prime number detector if the input is 3? A) High B) Low C) Undefined D) Depends on the circuit design Answer: A (High)
5.	Which of the following is a composite number? A) 2 B) 3 C) 5 D) 8 Answer: D (8)
6.	Which of the following is a valid Boolean expression for detecting odd prime numbers? A) A AND B B) A OR B C) NOT A OR B D) A XOR B Answer: D (A XOR B)
7.	Which of the following is a valid Boolean expression for detecting odd numbers?

A) A AND B

- B) A OR B
- C) NOT A OR B
- D) A XOR B

Answer: D (A XOR B)

- 8. Which of the following is a valid Boolean expression for detecting prime numbers?
 - A) A AND B
 - B) A OR B
 - C) NOT A OR B
 - D) A XOR B

Answer: C (NOT A OR B)

- 9. How many inputs are required for an odd-prime number detector?
 - A) 1
 - B) 2
 - C) 3
 - D) 4

Answer: 1 (one input)

- 10. How can the number of gates in an odd-prime number detector be reduced?
 - A) By increasing the number of inputs
 - B) By using more complex gates
 - C) By using simpler gates
 - D) By increasing the number of outputs

Answer: C (By using simpler gates)