8 Lecture - CS302

Important Mcqs

1.	Which of the following is NOT a basic logic gate? A) AND B) OR C) NOT D) XOR Solution: D) XOR
2.	Which of the following is the identity law for AND operation? A) $A + 0 = A$ B) $A + 1 = 1$ C) $A \cdot 1 = A$ D) $A \cdot 0 = 0$ Solution: C) $A \cdot 1 = A$
3.	Which of the following is the complement of the Boolean expression A + B? A) AB B) A + B C) A . B D) A'B' Solution: D) A'B'
4.	Which of the following is the DeMorgan's Law for NAND operation? A) $A \cdot B = A + B$ B) $A + B = A'B'$ C) $A'B' = AB$ D) $(A + B)' = A' \cdot B'$ Solution: D) $(A + B)' = A' \cdot B'$
5.	Which of the following is the output of the XOR gate if both inputs are 1? A) 0 B) 1 C) Cannot be determined D) None of the above Solution: A) 0
6.	Which of the following is a Boolean expression for the NOR gate? A) A + B B) A . B C) A'B' D) (A + B)' Solution: D) (A + B)'

7. Which of the following is the associative law for OR operation?

A) A + (B + C) = (A + B) + C

- B) A(B + C) = AB + AC
- C) A + B = B + A
- D) A(B + C) = AB + AC + BC

Solution: A) A + (B + C) = (A + B) + C

- 8. Which of the following is the complement of the Boolean expression A . B?
 - A) A + B
 - B) A . B
 - C) A'B'
 - D) AB

Solution: C) A'B'

- 9. Which of the following is a Boolean expression for the XOR gate?
 - A) A + B
 - B) A . B
 - C) A'B' + AB
 - D) (A + B) . (A'B')

Solution: C) A'B' + AB

- 10. Which of the following is a method used for logic simplification?
 - A) Karnaugh map
 - B) Quine-McCluskey algorithm
 - C) Boolean algebra
 - D) All of the above

Solution: D) All of the above