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 . 1 = A
   D) A . 0 = 0
   Solution: C) A . 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 . B = A + B
   B) A + B = A'B'
   C) A'B' = AB
   D) (A + B)' = A' . B'
   Solution: D) (A + B)' = A' . 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