## 8 Lecture - CS302

## Important Mcqs

1. Which of the following is NOT a basic logic gate?
A) AND
B) $O R$
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. $1=\mathrm{A}$
3. Which of the following is the complement of the Boolean expression $A+B$ ?
A) $A B$
B) $A+B$
C) $A . B$
D) $A^{\prime} B^{\prime}$

Solution: D) A'B'
4. Which of the following is the DeMorgan's Law for NAND operation?
A) $A$. $B=A+B$
B) $A+B=A^{\prime} B^{\prime}$
C) $A^{\prime} B^{\prime}=A B$
D) $(A+B)^{\prime}=A^{\prime}$. $B^{\prime}$

Solution: $D)(A+B)^{\prime}=A^{\prime}$. $B^{\prime}$
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) $A^{\prime} B^{\prime}$
D) $(A+B)^{\prime}$

Solution: D) $(A+B)^{\prime}$
7. Which of the following is the associative law for OR operation?
A) $A+(B+C)=(A+B)+C$
B) $A(B+C)=A B+A C$
C) $A+B=B+A$
D) $A(B+C)=A B+A C+B C$

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) $A \cdot B$
C) $A^{\prime} B^{\prime}$
D) $A B$

Solution: C) A'B'
9. Which of the following is a Boolean expression for the XOR gate?
A) $A+B$
B) $A \cdot B$
C) $A^{\prime} B^{\prime}+A B$
D) $(A+B)$. ( $\left.A^{\prime} B^{\prime}\right)$

Solution: C) $A^{\prime} B^{\prime}+A B$
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

