2. BOOLEAN ALGEBRA

1 MARK QUESTIONS

1. State Involution law.
2. Prove: - 1 + X = 1
3. What is maxterm?
4. What is tautology and fallacy?
5. State Involution law.
6. What is **minterm?**
7. What is the another name of Boolean algebra?
8. State Distributive law.
9. WHO DEVELOPED BOOLEAN ALGEBREA.

2 MARK QUESTIONS

1. Prove that (X+Y)(X+Y')=X
2. Prove algebraically that X + XY =X.
3. What is the canonical form of Boolean expression? Mention the types of Canonical expression

4. **Prove algebraically that (X+Y)(X+Z)=X+YZ.**
5. Prove that X(X+XY)=X.

5 MARK QUESTIONS

1. Given the boolean function F (A, B, C, D) = (0,4,8,9,10,11,12,13,15) reduce by the Karnaugh map using SOP.
2. Reduce F (A, B, C, D) = $\boxed{F(A,B,C,D)=\sum(5,6,7,8,9,10,14)}$
3. Reduce (A, B, C, D) = π (0, 4, 6, 7, 8, 12, 14, 15) using K-map.
4.
5. Using maps simplify the following expression in four variables W, X, Y and Z m0 + m4 + m8 + m9 + m10 + m11 + m12 + m13 + m15.
6. Reduce (A, B, C, D) = £ (0, 1, 2, 3, 4, 5, 9, 10, 14, 15)
7. Reduce F(A,B,C,D)=$\sum(0,1,2,3,8,9,10,11)$using K-map.