



## DEPARTMENT OF MATHEMATICS

### UNIT - V LATTICES AND BOOLEAN ALGEBRA

#### Properties of Lattice:

##### 1) Idempotent Law

$$a \wedge a = a$$

$$a \vee a = a$$

##### 2) Commutative Law:

$$a \wedge b = b \wedge a$$

$$a \vee b = b \vee a$$

##### 3) Associative Law:

$$(a \wedge b) \wedge c = a \wedge (b \wedge c)$$

$$(a \vee b) \vee c = a \vee (b \vee c)$$

##### 4) Absorption Law:

$$a \wedge (a \vee b) = a$$

$$a \vee (a \wedge b) = a$$