

EXERCISES - I

1. $(A \cdot B) \supset C$

$(A \cdot B) \supset [(A \cdot B) \cdot C]$ ----- Abs.

1. $(D \vee E) \cdot (F \vee G)$

$\therefore (D \vee E)$ ----- Simp.

1. $H \supset I$

$\therefore (H \supset I) \vee (H \supset \sim I)$ ----- Add.

1. $\sim (J \cdot K) \cdot (L \supset \sim M)$

$\therefore \sim (J \cdot K)$ ----- Simp.

1. $[N \supset (O \cdot P)] \cdot [A \supset (O \cdot R)]$

2. $N \vee A$

$\therefore (O \cdot P) \vee (O \cdot R)$ ----- C.D.

1. $(X \vee Y) \supset \sim (Z \cdot \sim A)$

2. $\sim \sim (Z \cdot \sim A)$

$\therefore \sim (X \vee Y)$ ----- M.T

1. $(S \equiv T) \vee [(U \cdot V) \vee (U \cdot W)]$

2. $\sim (S \equiv T)$

$\therefore (U \cdot V) \vee (U \cdot W)$ ----- D.S.

1. $\sim (B \cdot C) \supset (D \vee E)$

2. $\sim (B \cdot C)$

$\therefore D \vee E$ ----- M.P

10) 1. $\sim (H \cdot \sim I) \supset (H \supset I)$

2. $(I \equiv H) \supset \sim (H \cdot \sim I)$

$\therefore (I \equiv H) \supset (H \supset I)$ ----- H.S

1. $(F \equiv G) \supset \sim (G \cdot \sim F)$

$\therefore \sim (G \cdot \sim F) \supset (G \supset F)$

$\therefore (F \equiv G) \supset (G \supset F)$ ----- H.S