

11. If p , q and r are simple propositions with truth values T, F and T, respectively, then the truth value of $(\sim p \vee q) \wedge \sim r \rightarrow p$ is

(1) True

(2) False

(3) True if r is false

(4) True if q is true

$$\begin{aligned} 11. (1) \quad & (\sim p \vee q) \wedge \sim r \rightarrow p \\ & \equiv (F \vee F) \wedge F \rightarrow T \\ & \equiv F \rightarrow T \\ & \equiv T \end{aligned}$$