

Mathematical Reasoning - Class XI

Past Year JEE Questions

Questions

Question: 01

If the truth value of the Boolean expression $((p \vee q) \wedge (q \rightarrow r) \wedge (\sim r)) \rightarrow (p \wedge q)$ is false, then the truth values of the statements p, q, r respectively can be :

- A. T F T
- B. F F T
- C. T F F
- D. F T F

Solutions

Solution: 01

Explanation

p	q	r	$\underbrace{p \vee q}_a$	$\underbrace{q \rightarrow r}_b$	$a \wedge b$	$\sim r$	$\underbrace{a \wedge b \wedge (\sim r)}_c$	$\underbrace{p \wedge q}_d$	$c \rightarrow d$
T	F	T	T	T	T	F	F	F	T
F	F	T	F	T	F	F	F	F	T
T	F	F	T	T	T	T	T	F	F
F	T	F	T	F	F	T	F	F	T