Q.No.	DAY - 80
495	**Example 12.19** Using the equivalence property, show that $p \leftrightarrow q \equiv (p \wedge q) \vee (\neg p \wedge \neg q)$.
496	7. Verify whether the following compound propositions are tautologies or contradictions or contingency (iii) $(p \rightarrow q) \leftrightarrow (\neg p \rightarrow q)$ (iv) $\big((p \rightarrow q) \wedge (q \rightarrow r)\big) \rightarrow (p \rightarrow r)$
497	8. Show that (i) $\neg(p \wedge q) \equiv \neg p \vee \neg q$ (ii) $\neg(p \rightarrow q) \equiv p \wedge \neg q$
498	13. Using truth table check whether the statements $\neg(p \vee q) \vee (\neg p \wedge q)$ and $\neg p$ are logically equivalent.
499	14. Prove $p \rightarrow \big(q \rightarrow r\big) \equiv (p \wedge q) \rightarrow r$ without using truth table
500	15. Prove that $p \rightarrow (\neg q \vee r) \equiv \neg p \vee (\neg q \vee r)$ using truth table.
End of chapter 12	