## 34. Statement $(p \rightarrow q) \leftrightarrow (\sim q \rightarrow \sim p)$

- (1) is contradiction
  - (2) is tautology
  - (3) is neither contradiction not tautology
  - (4) none of these

(2) 
$$(\neg q \rightarrow \neg p)$$
 is contrapositive of  $(p \rightarrow q)$ .

Therefore,  $(p \rightarrow q) \leftrightarrow (\neg q \rightarrow \neg p)$  is tautology.

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