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Quiz no 2

10-SE-151

alpha group.

Rabia Tariq

Qno 1: Using resolution proof prove the following.

i)  $\bar{p} \vee q \vee r \rightarrow (i)$

$\bar{q} \rightarrow (ii)$

$\bar{r} \rightarrow (iii)$

$\bar{p} \rightarrow (a)$

From eq (i) and (ii)

$\bar{p} \vee q \vee r$

$\bar{q}$

$\therefore \bar{p} \vee r \rightarrow (iv)$

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From eq (iii) and (iv)

$\bar{r}$

$\bar{p} \vee r$

$\therefore \bar{p} \rightarrow (a)$  (Proved)

(Removing contradiction)

ii)  $p \rightarrow q \rightarrow (i)$

$p \vee q \rightarrow (ii)$

$\bar{q} \rightarrow (b)$

From eq (i)

$p \rightarrow q = \sim p \vee q$

So, (i) becomes

$\sim p \vee q \rightarrow (i)$

$p \vee q \rightarrow (ii)$

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