Quiz-2 :-

Q1:- Definition of a "tableau is contradictory"

Ans:- A tableau proof of a proposition α is a contradictory tableau with the root entry $F\alpha$. A proposition is tableau provable, written $\vdash \alpha$, if it has a tableau proof.

A tableau refutation for a proposition α is a contradictory tableau starting with $T\alpha$. A proposition is tableau refutable if it has a tableau refutation.

A Tableau refutation is an extra-defined for contradictory. It is a bonus right.

⇒ The main concept that is defined is Contradictory

* Concept name :- Tableau proof.
  Parameter :- A proposition α.

* Concept name :- Tableau provable.
  Parameter :- A proposition.

* concept name :- Tableau proof.
  Argument :- it.

* Concept name :- Tableau refutation.
  Parameter :- A proposition

Q2:-

Meaning of atomic tableau:-

The atomic tableau evaluates the truth values of these atomic propositions in various branches of the tableau. It checks whether they are true or false under different conditions or valuations.

Given $T(\alpha \rightarrow \beta)$

$F\alpha$ $T\beta$

The above mentioned logical connective "$\rightarrow$".

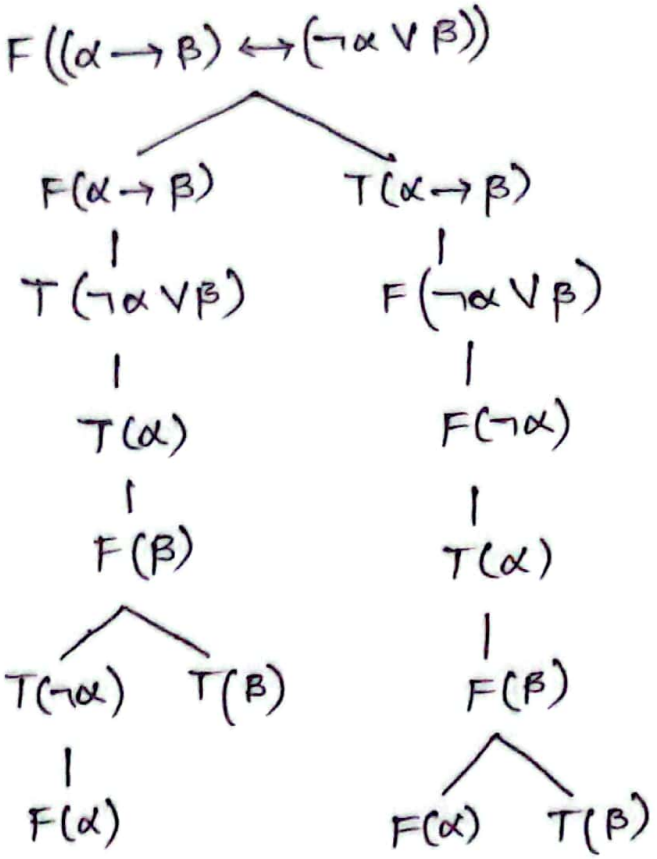
⇒ The relation between the atomic tableau evaluating truth values and the definition of the main logical connective ($\rightarrow$) in the proposition at the root entry lies in the way logical connectives and truth values are accessed within the tableau.

* Here, the mentioned "$\rightarrow$" logical connective is central operator which operates the relationship between Sub-formula's. From above diagram "β" is the consequence of "α".

Finally, The atomic tableau explores how the truth values of atomic propositions interact with the main logical connective to establish the truth or falsity of the entire proposition.

Q3:- Tableau proof of $((\alpha \to \beta) \leftrightarrow (\neg\alpha \vee \beta))$

Ans:-



Q4:-

From the given figure we can say that the give tableau is a combination of two propositions $(A \vee B)$ and $(A \wedge B)$. Here both of the propositions are true. Then the complete proposition is true.

The following entries are reduced in the give tableau:

$T((A \vee B) \wedge (A \wedge B))$ and $T(A \wedge B)$.

The following entry is not reduced in the given tableau:

$T(A \vee B)$.