$$
\begin{array}{lcl}
U \models s = t : \mathcal{F} & :\Longleftrightarrow & s|_U = t|_U \in \Gamma(U, \mathcal{F}) \\
U \models \top & :\Longleftrightarrow & U = U \text{ (always fulfilled)} \\
U \models \bot & :\Longleftrightarrow & U = \emptyset \\
U \models \varphi \wedge \psi & :\Longleftrightarrow & U \models \varphi \text{ and } U \models \psi \\
U \models \varphi \vee \psi & :\Longleftrightarrow & \cancel{U \models \varphi \text{ or } U \models \psi} \\
 & & \text{there exists a covering } U = \bigcup_i U_i \text{ such that for all } i\text{:} \\
 & & \qquad U_i \models \varphi \text{ or } U_i \models \psi \\
U \models \varphi \Rightarrow \psi & :\Longleftrightarrow & \text{for all open } V \subseteq U\text{: } V \models \varphi \text{ implies } V \models \psi \\
U \models \forall s : \mathcal{F}.\ \varphi(s) & :\Longleftrightarrow & \text{for all sections } s \in \Gamma(V, \mathcal{F})\text{, open } V \subseteq U\text{: } V \models \varphi(s) \\
U \models \exists s : \mathcal{F}.\ \varphi(s) & :\Longleftrightarrow & \cancel{\text{there exists a section } s \in \Gamma(U, \mathcal{F}) \text{ such that } U \models \varphi(s)} \\
 & & \text{there exists an open covering } U = \bigcup_i U_i \text{ such that for all } i\text{:} \\
 & & \qquad \text{there exists } s_i \in \Gamma(U_i, \mathcal{F}) \text{ such that } U_i \models \varphi(s_i)
\end{array}
$$

Table 1: The Kripke–Joyal semantics of a sheaf topos.