Homework - Segment 1

Translate the following statements and identify the main operator:

1) Chewbacca is a Wookie.
2) Luke is a Jedi and Leia is a general.
3) If Han flies solo, Yoda takes a nap.
4) Baby Yoda is happy if and only if Mando throws the ball.
5) Rey uses her lightsaber only if Endor has a forest moon.
6) If either Boba Fett or Jango Fett go to the party, Luke will run away.
7) Neither Luke nor Han is happy, but Yoda is having a great time.
8) Leia needs to leave if Yoda arrives.
9) Baby Yoda asking is the only thing that would get me to agree, but Baby Yoda did not ask.
10) It is not the case that Baby Yoda having a party is sufficient for Han to throw a fit.

Translate the following and answer the questions.

1) If either Han or Chewy is the pilot, Leia feels safe. Leia feels safe but Han is not the pilot.

Questions: Are these statements consistent? Are they logically equivalent? If consistent, under what condition could they all be true?

2) If Yoda taking a nap is necessary for Luke to leave, then Han will pilot the ship. If Han does not pilot the ship, then Luke leaves and Yoda does not take a nap.

Questions: Are these statements consistent? Are they logically equivalent?

3) Either Han is a pilot or Leia is a general. Yoda is napping and Han is not a pilot.

Question: What follows logically from these statements?

4) If both Chewy and Mando ask nicely, Rey will tell a joke. Mando asks nicely. Either Chewy asks nicely or Boba sings a song. Therefore, Rey will tell a joke.

Question: On what assumption does this argument rely?

5) If Boba or Chewy visits, then Han will clean. Leia will be pleased if Han cleans. Leia is pleased but Boba did not visit.

Question: If these statements are to all be true, what must be the case?