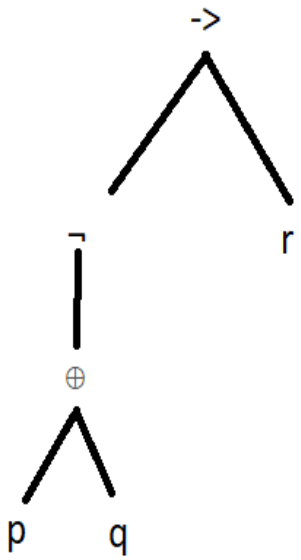
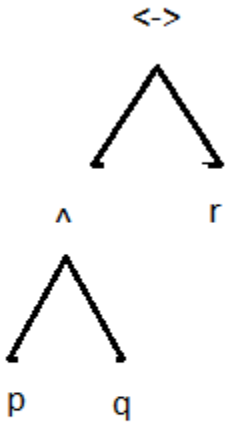
UTS Logif 2019/2020

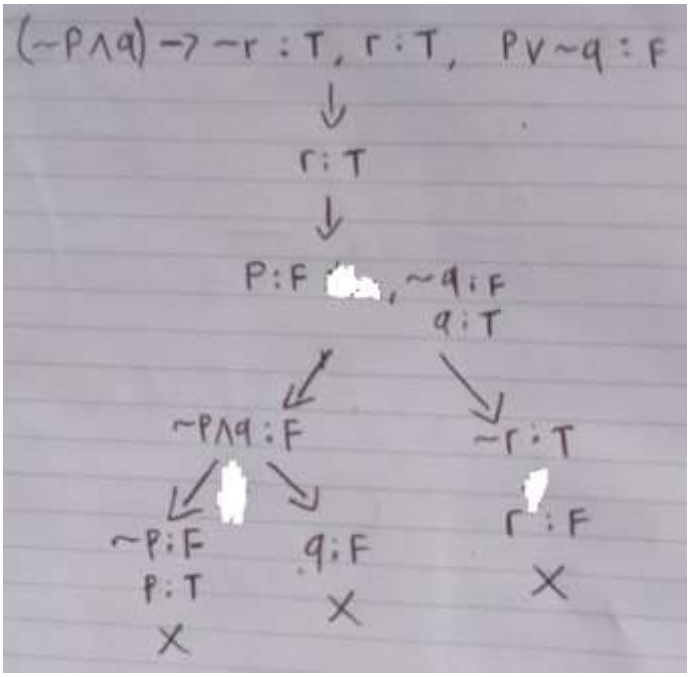
1. (i) a. ¬ (p ⊕ q) -> r
   b. (p ^ q) <-> r
   (ii) a. b.





2.

3. Tautologi
   (p -> (q -> r)) -> ((p -> q) -> (p -> r))
   T -> F
   p -> (q -> r) : T ; (p -> q) -> (p -> r) : F
   F -> T, p: F ; T -> F
   q -> r : T ; p -> q : T dan p-> r : F
   q: F dan r: T ; p: F, q: T dan p: T, r:F
   <u>Tidak Tautologi</u>
4. Semantic Tableaux, buktikan (¬p^r)-> ¬r, r I= p v ¬q!



5. ((p v q) -> r) dan (p -> r) ^ (q ->r) ekuivalen?
   (p v q) -> r
   ~(p v q) v r
   (~p ^ ~q) v r
   (~p v r) ^ (~q v r)
   (p -> r) ^ (q -> r) EKUIVALEN
6. CNF / DNF dari ((p -> q) ^ ~q) -> p!
   a. CNF
      ~((~p v q) ^ ~q) v p
      (~(~p v q) v ~~q) v p
      ((~p v q) v q) v p
   b. DNF
      CNF: ((~p v q) v q) v p)
      (~p v q) v p
      T v q
      T