新冠病毒题目

1.$\forall_p suspect(p, covid_1 9) \wedge test(p, RT - PCR) \Rightarrow diagnose(p, covid_1 9)$

2.$\forall_p suspect(p, covid_1 9) \wedge test(p, gene) \Rightarrow diagnose(p, covid_1 9)$

3.$\forall_p suspect(p, covid_1 9) \wedge test(p, igM) \wedge test(p, igG) \Rightarrow diagnose(p, covid_1 9)$

4.
$\forall_p suspect(p, covid_1 9) \wedge [[\neg testPre(p, igM) \wedge testNow(p, igM)] \vee [recuring(p) \wedge testSevere(p, igG, 4)]] \Rightarrow diagnose(p, covid_1 9)$

9.7

a. Let P(x,y) be the relation “x is less than y” over the integers. Then

∀ x ∃ y P(x,y) is true but ∃ x P(x,x) is false.

b. Converting the premise to clausal form gives P(x,Sk0(x)) and converting the negated

goal to clausal form gives ¬P(q,q). If the two formulas can be unified, then these

resolve to the null clause.

c. If the premise is represented as P(x,Sk0) and the negated goal has been correctly

converted to the clause ¬P(q,q) then these can be resolved to the null clause under the

substitution {q/Sk0,x/Sk0}

d. Suppose you are given the premise ∃ x Cat(x) and you wish to prove Cat(Socrates).

Converting the premise to clausal form gives the clause Cat(Sk1). If this unifies with

Cat(Socrates) then you can resolve this with the negated goal ¬Cat(Socrates) to

give the null clause.