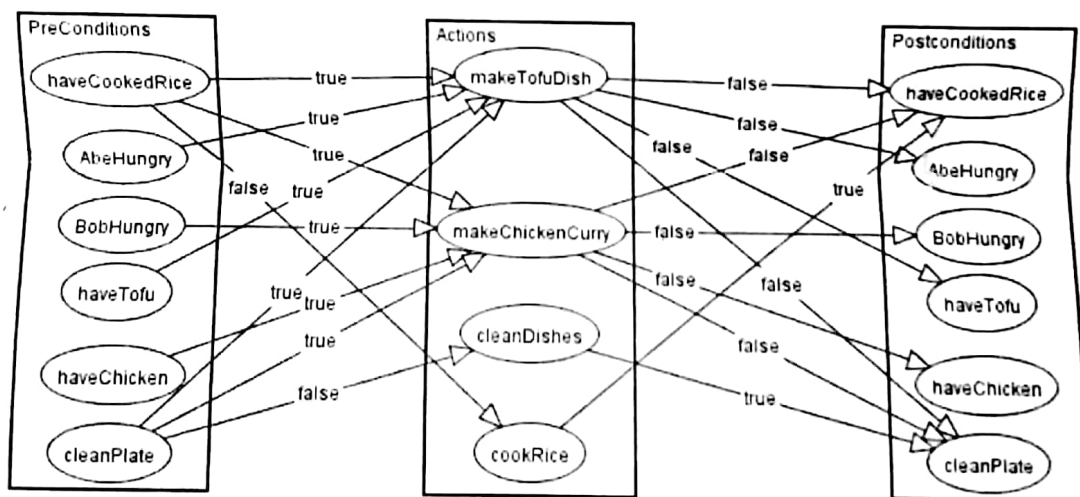CSE 4617
Quiz 2
Time: 30 minutes

1. Two roommates, Abe and Bob, recently bought a rice cooker. They are both excited to use it to make meals, but unfortunately the rice cooker is a very cheap model that is only large enough to make rice for one person at a time. Abe and Bob also only have a single plate in their house (they're saving up for buying another plate, but the rice cooker was more important). They are also both hygieneconscious and insist on using a clean plate for each meal, therefore each of them will clean the dishes (i.e., the plate) after he prepares a meal. Abe is a vegetarian and would serve the rice with tofu, while Bob hates tofu and would use the rice to make a chicken curry instead. To avoid wasting the rice, they will only cook rice when there is no more cooked rice left. See Figure below for the STRIPS representation of the problem.

a. List the variables/features that define the states in the problem, as well as their domains. [3 marks]
b. List the actions in this problem, with their preconditions and effects. [3 marks]

c. Convert this STRIPS problem to a CSP planning problem with a horizon of 1. [4 marks]
d. Show the truth table representing the pre-condition constraint for cookRice at time 0 and explain what the different rows mean. [5 marks]