CS324 Quiz #12 Name----------

True or False: (all questions are about ***Pure*** **Logic Programming (PLP), and Prolog**)

a) The main goal of the **PLP** paradigm is for the programmer to fully utilize the *control* (execution details) to help the implementation of the *logic* of the problem's solution. F

b) **PLP's** coding of a problem is much more efficient than regular (impure) Prolog coding. F

c) In Prolog, the first step of any "**goal**" deduction is to unify it with a program *clause*. F

d) The "***fail***" clause in Prolog is a clear violation of the *purity* of the PLP. T

e) The ***cut*** "!" operator in Prolog is universally asserted. T

f) A non-terminating (upper case name) symbol in any asserted Prolog program *goal* will be used to output all possible values that makes such goal asserted (true). T

g) The *bottom-up* deduction mechanism is much better than peer *top-down* in avoiding the calculations of redundant intermediate subgoals solutions. T

h) The fastest goal deduction is when we do not have any *cut* "!" operator on the code. F

i) The Prolog programmer uses the ***cut*** subgoal to enforce more *logic* on the code. F

j) The main reason of the inability to deduce in parallel all subgoals in some rule is its *impurity* (mixing logic and control issues). T

Extra Credit: (+ 3 if correct, otherwise - 2 pts)

k) A never be resolved *goal* might still be possibly unified. F

l) Once a goal name is matched to a rule/fact name, the it is automatically unified. F

m) Unification of ***f****(X, 2) with* ***g****(3, Y)* results in the following assignments: X=3, Y=2. F

n) The following code is the Prolog implementation of negating X: F

```
not(X):- !, Call(X), fail.
not(X).
```