

2001 Paper 12 Question 8

Prolog for Artificial Intelligence

Consider the following Prolog program, which is intended to define the third argument to be the maximum value of the first two numeric arguments:

```
max(X, Y, X) :- X >= Y, !.  
max(X, Y, Y).
```

- (a) Provide an appropriate query to show that the above program can give an incorrect result. [4 marks]
- (b) Explain the cause of the error. [6 marks]
- (c) Suggest a correction. [5 marks]
- (d) Write a Prolog program to find the maximum of a list of numbers. [5 marks]