AI Comp exam Spring 2003

I.What types of representations do you know for automatically learned knowledge?
a.

b.

c.

d.

e.

II. Which of the following are HORN clauses?
a) B=>A

b) C/\D=>B

c) B\/¬C\/¬D

d) B\/¬C\/D

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III. Compare and Contrast backtracking over CSPs versus Partial Order Planning Algorithms.

IV. Write in first order logic:
a)There exist at most two sheriffs.
(can use: sheriffs(x))

b)There exists a barber that shaves all the man in town that so not shave alone.
(can use: barber(x), shave(x,y), man(x))

c) AI comps are funny.
(can use: funny(x), AI_comps(x))

Note: you can also use in all cases: exists, for-all, not, and, or, =, (,) and variables

V. Trace a simple forward inference engine over the next propositional logic database
r1: f1->f2
r2: f2, f3->f4
r3: f1, f4->f3
r4: f3, f4->f5
f1, f2, f3

queue	*facts*	*fired-rules*	*new-facts*

VI. Mention qualitative relations you know between amount of available data and number of parameters recommended for classification algorithms in machine learning.