Solutions to Practice Questions for Final (Set I)

1. A

```
% actions are exogenous
{lift(E,T)} :- end(E), T=0..m-1.
```

2. A

```
% File 'monkey-postdiction.lp'
:- not walk(l3,0).
:- not 1{pushBox(LL,1):location(LL)}.
:- loc(box,l3,0).
```

3. C

```
clingo version 5.5.0

Reading from stdin

Solving...

Answer: 1

p(t,0) p(f,1)

Answer: 2

p(f,1) p(f,0)

Answer: 3

p(t,1) p(t,0)

Answer: 4

p(t,1) p(t,0)

Answer: 5

p(t,1) p(f,0)

Answer: 6

p(t,1) p(f,0)

SATISFIABLE
```

4. A

The formulae represent Penalty-based weight.

5. A

$P(A = 0|B = 1, C = 1)$

$= P(A = 0, B = 1, C = 1)/P(B = 1, C = 1)$

$= (0.15)/(0.15 + 0.05)$

$= 0.15/0.20$

$= 0.75$

6. B

The set {MB(birb)} satisfies the following rules:

α: $B(x) \leftarrow RB(x)$

α: $\leftarrow RB(x), MB(x)$

α: $MB(birb)$

Hence,

$$W_\Pi(\{MB(birb)\}) = e^{3\alpha}$$

7. A, C, D

CycL is an extension of First-Order Logic.

8. D

The basic ideas of RDF are Resources, Properties, and Statements.

9. A, B, C, D

Disjointness of Concepts, Coverings, Domain Restrictions, and Range Restrictions are all examples of Concept Inclusions.

10. A

A. Correct Statement

B. $\sqsupseteq$ is incorrect, $\equiv$ is used to capture knowledge

C. $\sqsubseteq$ is incorrect, $\equiv$ is used to capture knowledge

D. $\forall$ is incorrect when referring to multiple ingredients