**Question 1:**

False:

Directed graphs whose vertices correspond to the states of the world and edges are labeled by actions.

Diagram

Description automatically generated

**Question 2:**

A: Wrong

* 1. { p(f, 0), p(t, 1)}

At time 0, the state of p is false. And at time 1, it is true but there is no action performed. So it is wrong

B: Wrong

* 1. { p(f, 0), a(0)}

At time 0, the state of p is false. And there is an action performed, but the state has not changed. So it is wrong.

C: Correct

{ p(t, 0), p(t, 1), a(0)}

At time 0, the state p is true. At time 1, the state p is true and an action is performed. It is correct.

D: Correct

* 1. { p(f, 0), p(f, 1)}

At time 0, the state p is false, and at time 1 also the state is false. And there is no action performed. This is correct.

**Question 3:**

Fluents are either Boolean or Multi valued.

A: Monkey has the Banana, can either be true or false. So, this is correct

B: Monkey grasps the Banana, this is just an action, to grasp we do not know what other actions it is dependent on, so it is wrong.

C: The location of the box, this is a multi-valued fluent. So, this is correct

D: Monkey is on the box; this is a Boolean value. It can either be true or false. So, this is correct too.

**Question 4:**

Common-sense law of inertia states that the state must not change when there is no action performed. It must be defined in the choice-rule.

A: If p is false at time 0, then p is true at time 1. This is against common sense law of inertia. This is wrong.

B: If p is false at time 0, then p is false at time 1. This choice rule is correct.

If p is true at time 0, then p is false at time 1. This choice rule is wrong.

So, this option is wrong.

C: If p is true at time 0, then p is true at time 1. This holds common-sense law of inertia.

If p is false at time 0, then p is false at time 1. This choice rule is correct.

So, this option is correct.

**Question 5:**

Graphical user interface, text

Description automatically generated

**Question 6:**

1. Graphical user interface, text

   Description automatically generated
2. **Text

   Description automatically generated**
3. Logo

   Description automatically generated with medium confidence
4. Text

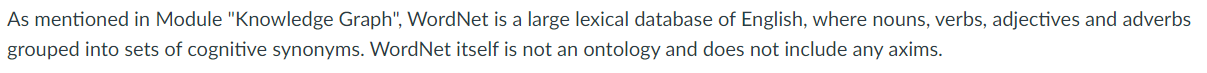
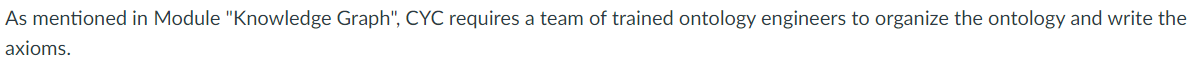
   Description automatically generated with low confidence

**Question 7: PDF Opened**

Graphical user interface, text

Description automatically generated

**Question 8:**

1. 
2. 
3. 
4. 

**Question 9:**

Graphical user interface, text, application, email

Description automatically generated

**Question 10:**

Graphical user interface, text, application

Description automatically generated