Module 3 Graded Quiz

Due Feb 20 at 11:59pmPoints 10Questions 10Available after Feb 6 at 11:59pmTime Limit 300 MinutesAllowed Attempts 3

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	21 minutes	10 out of 10

Score for this attempt: 10 out of 10

Submitted Feb 20 at 5:26pm
This attempt took 21 minutes.

	Question 1	1 / 1 pts
	What is the stable model of the following one-rule program? p :- not p.	
	○ {p}	
Correct!	No stable model	
	○ Ø	

Question 2 1 / 1 pts

Assuming the signature consists of p, q, r. Which of the options are models of the following program? $p \leftarrow q \wedge r$ $\mathsf{q} \leftarrow \mathsf{p}$ $r \leftarrow \mathsf{p}$ Choose all that apply. Correct! ∅ (empty set) (q, r) Correct! {r} Correct! {q} Correct! {p, q, r} {p} {p, q}

Question 3	1 / 1 pts
Assuming the signature consists of p, q, r. Which of the option i stable model of the following program?	s the
$p \leftarrow q \wedge r$	
$q \leftarrow p$	
$r \leftarrow p$	
○ {q, r}	

Correct!	○ {p, q}
	○ {p}
	○ {r}
	∅ (empty set)
	○ {p, r}
	(p, q, r)
	○ {q}

1 / 1 pts **Question 4** Which option is a positive program in the language of clingo? cloudy, rain :- not sunny. wet :- rain. #const n=5. composite(N) :- N=1..n, I=2..N-1, N\I=0. prime(N) :- N=2..n, not composite(N). number(1). small_number(1). big_number(X) :- number(X), not small_number(X). #const k=2. fullTimeStudent, partTimeStudent :- student. student :- k=1..3.

Correct!

Question 5

1 / 1 pts

How many atoms are there in the stable model of the following clingo program?

pair(0..1, (1..2)*(2..3)).

Correct!

- 8
- 16
- 2
- 4

Question 6

1 / 1 pts

The propositional image of a clingo program consists of the instances of its rules rewritten as propositional formulas. Which option is equivalent to the propositional image of the following clingo program?

p(3..6).

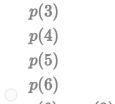
q(X*2) := p(X), X<5.

$$q(6) \leftarrow p(3)$$

$$q(8) \leftarrow p(4)$$

$$q(10) \leftarrow p(5)$$

$$q(12) \leftarrow p(6)$$



 $q(6) \leftarrow p(3)$ $q(8) \leftarrow p(4)$

 $q(10) \leftarrow p(5)$

 $q(12) \leftarrow p(6)$

Correct!

$$p(3) \wedge p(4) \wedge p(5) \wedge p(6)$$

 $q(6) \leftarrow p(3)$

 $q(8) \leftarrow p(4)$

$$\begin{array}{c} p(3) \wedge p(6) \\ q(6) \leftarrow p(3) \end{array}$$

Question 7

1 / 1 pts

Which option is equivalent to the following clingo program?

p(1,1). p(1,2). p(2,1). p(2,2).

op(1;2, 1;2).

Correct!

p(1..2, 1..2).

○ p(X, X**|X-Y|) :- X=1..2, Y=2..3.

 \bigcirc p(X,Y) :- X=1..2, Y=1..X.

Question 8

1 / 1 pts

Which of the statements about the following clingo program Π is true?

	a :- not b.
	b :- not a.
	\bigcirc The models of the propositional image of Π happen to be the same as the stable models of $\Pi.$
	\bigcirc {a, b} is a stable model of Π
	$\bigcirc \ \varnothing$ (i.e., empty set {}) is a model of the propositional image of $\Pi.$
ect!	$\ \ \bigcirc$ The minimal models of the propositional image of Π happen to be the same as the stable models of $\Pi.$

Question 9	1 / 1 pts
Which of the clingo programs can represent "either a is true o	or b is true"?
p(a;b).	
a.	
O b.	
a :- not a.	
b :- not b.	
a :- not b.	
b :- not a.	

Correct!

	Question 10 1/1	pts
	True or False? For any propositional formula F, every stable model of a model of F.	F is
Correct!	True	
	○ False	

Quiz Score: 10 out of 10