2020-2021 1-GS Methods in AI research (INFOMAIR)
Announcements
Dashboard
Staff Information
Course Information
Course Schedule
Course Content (lecture slides etc.)
Team Project
Questionnaire and submitting project deliverables
My Grades

Review Test Submission: Quiz Lectures 11&12

User	Otto Mättas
Course	2020-2021 1-GS Methods in AI research (INFOMAIR)
Test	Quiz Lectures 11&12
Started	11/4/20 6:06 PM LATE
Submitted	11/4/20 6:13 PM LATE
Due Date	10/14/20 6:00 PM
Status	Needs Grading
Attempt Score	Grade not available.
Time Elapsed	6 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions

Question 1

10 out of 10 points

The description logic concept

$\forall reads.Comic$

denotes the class of:

Selected Answer: ✓ those who read only comics

Answers: the readers of all comics

the comics that everyone reads

✓ those who read only comics

all the comics that people read

Question 2

10 out of 10 points

Select the correct translation of Description logic statement

$Vegan \equiv Person \sqcap \neg \exists Eats.AnimalProduct$

into First-order logic (in the above formula $\sqcap$ denotes the concept conjunction).

Selected Answer: ✓ $\forall x(Vegan(x) \leftrightarrow Person(x) \wedge \neg \exists y(Eats(x,y) \wedge AnimalProduct(y)))$

Answers:

$\forall x(Vegan(x) \leftrightarrow Person(x) \wedge \neg(\exists y)(Eats(x,y) \rightarrow AnimalProduct(y)))$

✓ $\forall x(Vegan(x) \leftrightarrow Person(x) \wedge \neg \exists y(Eats(x,y) \wedge AnimalProduct(y)))$

$\forall x(Vegan(x) \leftrightarrow Person(x) \wedge \neg Eats(x, AnimalProduct))$

$\forall x(Vegan(x) \rightarrow Person(x) \wedge \neg \exists y(Eats(x, AnimalProduct(y))))$

Question 3

Needs Grading

What is the main difference between concepts and statements in Description logic?

(please provide a short answer)

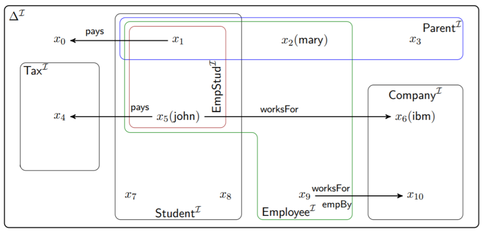
Selected Answer: [None Given]

Correct Answer: ✓
Concepts describe classes of objects, while statements talk about the elements of the concept language (concepts, roles and individuals) and might be true/false.
Interpretations map concepts to sets of elements of the domain, while the statements are true or false under an interpretation (i.e., an interpretation satisfies/does not satisfy a statement)

Response Feedback: [None Given]

Question 4

Needs Grading



List all the elements of the set obtained by applying the interpretation function from the interpretation depicted above to the following concept:

$Tax \sqcup \exists pays.Tax$

(the symbol $\sqcup$ denotes concept disjunction)

Selected Answer: x4, x5

Correct Answer: ✓ x4 and x5

Response Feedback: [None Given]

Question 5

0 out of 10 points

If P is an unary relation symbol, then for an arbitrary model M of the formula

$(\exists x P(x)) \wedge \exists x \neg P(x)$

we know that M

Selected Answer: ✗ such M does not exist, since $P(x)$ cannot be both true and false in one model

Answers: ✓ has at least two elements

has at most one element

such M does not exist, since $P(x)$ cannot be both true and false in one model

there is only one element of the domain for which P holds

Question 6

0 out of 10 points

For any formula F, let $M(F)$ denotes the set of all models of F.

If A, B, C are formulas such that A entails $B \vee C$, which statement is necessarily true?

Selected Answer: ✗ $M(B) \cup M(C)$ is a subset of $M(A)$

Answers: $M(B) \cap M(C)$ is a subset of $M(A)$

✓ $M(A)$ is a subset of $M(B) \cup M(C)$

$M(A)$ is a subset of $M(B) \cap M(C)$

$M(B) \cup M(C)$ is a subset of $M(A)$

Question 7

Needs Grading

Are any aspects of the lecture material unclear, or do you have follow-up questions about this?If I have your feedback in time and if there is sufficient time to do so, I will try to address this during the live lecture that is associated with this question.

Leave this blank if you do not have any questions.

Selected Answer: [None Given]

Correct Answer: [None]

Response Feedback: [None Given]

Question 8

Needs Grading

Which exercise(s) from the list of exercises (posted on BB - reasoning part) did you find difficult?

(Please provide a short explanation, if possible)

Selected Answer: [None Given]

Correct Answer: [None]

Response Feedback: [None Given]

Wednesday, November 4, 2020 10:32:35 PM CET

← OK