2020-2021 1-GS Intelligent agents (INFOIAG)
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Review Test Submission: Quiz 2

User	Otto Mättas
Course	2020-2021 1-GS Intelligent agents (INFOIAG)
Test	Quiz 2
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Attempt Score	80 out of 100 points
Time Elapsed	18 minutes out of 40 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers, Feedback

Question 1

10 out of 10 points

Which of the following is not part of an ontology?

Selected Answer: ✓ C. Concept functions

Answers:
A. Concept properties
B. Concept instances
✓ C. Concept functions
D. Concept relations

Question 2

20 out of 20 points

Which one of the following is correct about RDF-S?

Selected Answer: ✓ B. RDF-S gives meaning to triples written in RDF by describing the concepts.

Answers:
A. RDF-S extends RDF so that you can express information that are not in triples.
✓ B. RDF-S gives meaning to triples written in RDF by describing the concepts.
C. The subclass relation in RDF-S (rdfs:subClassOf) is used to create a mereology.
D. The subproperty relation in RDFS (rdfs:subPropertyOf) is used to create a taxonomy among ontology concepts.

Question 3

20 out of 20 points

You are given the following triples. Which of the options can you infer about Yan?

Instructor rdfs:subClassOf Woman
hasLastName rdfs:domain Instructor
hasLastName rdfs:range Name
Yan hasLastName Cheng

Selected Answers: ✓ Yan is an Instructor
✓ Yan is a Woman

Answers:
Yan is not a Man
✓ Yan is an Instructor
Yan is not a Name
✓ Yan is a Woman

Question 4

20 out of 20 points

Given following OWL statements, which option is correct?

<Student rdf:ID="Aram"/>

<owl:Class rdf:ID = "Student">

<rdfs: subClassOf>
<owl: Restriction>

<owl:onProperty rdf:resource="#livesIn"/>

<owl:hasValue rdf : resource = "#Utrecht" />
</owl: Restriction>
<rdfs: subClassOf>
</owl: Class>

Selected Answer: ✓ A. All students live in Utrecht.

Answers:
✓ A. All students live in Utrecht.
B. Only students live in Utrecht.
C. Aram might or might not live in Utrecht.
D. Some students live in Utrecht but some might live elsewhere.

Question 5

6 out of 10 points

Consider Priguard where an agent detects privacy violations in online social networks. Below are some of the steps of the agent design and execution. Order them in terms of dependency so that each step can be done without requiring further steps.

Answers	Selected Answer
✓ 1. Identify the privacy preferences of the user (e.g., by asking the user).	✗ 1. Design an ontology with concepts from online social networks so that possible violations can be inferred.
✓ 2. Design an ontology with concepts from online social networks so that possible violations can be inferred.	✗ 2. Identify the privacy preferences of the user (e.g., by asking the user).
✓ 3. Decide on the privacy violation that will be checked.	✓ 3. Decide on the privacy violation that will be checked.
✓ 4. Create the current state of the online social network.	✓ 4. Create the current state of the online social network.
✓ 5. Check if the violation statement holds in the current state.	✓ 5. Check if the violation statement holds in the current state.

Question 6

0 out of 10 points

You are given an algorithm for detecting privacy violations. The user specifies what would constitute a privacy violation and the algorithm uses that information to check if the violation holds in a given state. You are also told that the algorithm is sound but not complete. Which one of the following is correct?

Selected Answer: ✗ When an algorithm detects a violation, sometimes it is indeed a violation but sometimes not.

Answers:
✓ If the algorithm detects a violation, then it is indeed a violation.
The algorithm detects all violations.
When an algorithm detects a violation, sometimes it is indeed a violation but sometimes not.
The algorithm does not always terminate and thus cannot always detect the violations.

Question 7

4 out of 10 points

Assume that you are in a project to devise a centralized system for detecting privacy violations, which is not agent-based. The general idea of the project is to collect users' privacy preferences in a database, check for the violations, and notify the user if one exists.

You are trying to convince your project partners that it is better to go with an agent-based system. Which of the following arguments would be meaningful?

Selected Answer: ✓ C. With an agent-based system, each user would share their privacy preferences only with her own agent. With the centralized system the preferences are stored in a centralized location. Some of the users might not be comfortable with storing their preferences centrally and thus not use the centralized system.

Answers:
A. The individual privacy preferences of users may change over time and updating them on the central system would not be possible.
✓ B. With a centralized system, there is a risk of using users' privacy preferences to infer information about the society as a whole, posing a potential risk. However, given that the agents do not exchange their users' privacy preferences among themselves, this is not a potential risk for agent-based systems.
✓ C. With an agent-based system, each user would share their privacy preferences only with her own agent. With the centralized system the preferences are stored in a centralized location. Some of the users might not be comfortable with storing their preferences centrally and thus not use the centralized system.
✓ D. The centralized system would have to check for violations on states that are visible to each user, requiring the system to access individual world states of each user. This would require giving access to other personal information.

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← OK