

**START OF QUIZ**

**Student ID:**

**38522413, Wang, Yuxi**

## Question 1

Topic: Lecture 4

Source: Lecture 4

In class, we went over some common OWL and RDFS constraints that we can place on predicates, but we only ever attached one. Can you think of any instances of bivariate (ie, two parameter) predicates that could use multiple constraints? If so, briefly describe the predicate and its constraints, and if not, briefly describe why this is unnecessary. (2)

## Question 2

Topic: Lecture 3

Source: Lecture 3

Prove that  $A \leftrightarrow B \iff A \rightarrow B \ \& \ B \rightarrow A$  (1)

### Question 3

Topic: Lecture 2

Source: Lecture 2

How are tools like the General Inquirer or LIWC used to perform content analysis? (1)

## Question 4

Topic: Lecture 3

Source: Lecture 3

Given that A is True, B is True, and C is True, list 3 complex statements that are true, and 2 that are false.

(1)

## Question 5

Topic: Lecture 4

Source: Lecture 4

Why is FOL more expressive than ontologies (Description logics)? ie, what can FOL do that ontologies can't? (1)

## Question 6

Topic: Lecture 2

Source: Lecture 2

In class, I mentioned that we rarely do WSD explicitly, because we would need one model / word. In COLX 521, we saw that we could lemmatize words to reduce them to a common form. Why couldn't we do something similar (like reducing all synonyms to a common hypernym) for WSD? (2)

## Question 7

Topic: Lecture 1

Source: Lecture 1

Why is Wu-Palmer similarity more reliable than path similarity? (1)



## Question 8

Topic: Lecture 1

Source: Lecture 1

What are the benefits of representing synonymy and hypernymy in a graph? Do you think there could be a better data structure or way of representing the information? Briefly explain. (2)

## Question 9

Topic: Long

Source: Lecture 3

Write an FOL representation for the following sentences: Blueberries are sweet, but strawberries are sweeter. The book is always better than the movie. Some spiders are dangerous. In winter, it always rains in Vancouver.

**END OF QUIZ**