IIT Jodhpur

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Quiz-8 (19-04-2020)

1 message

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Quiz-8 (19-04-2020)

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Which of the following is/are equivalent? *

- [x] ∀x.(P(x)) and ~∃x.(~P(x))
- [x] ∃x.(P(x)) and ~∀x.(~P(x))
- [x] ~∀x.(P(x)) and ∃x.(~P(x))

- [x] ~∃x.(P(x)) and ∀x.(~P(x))

Assume our domain has four elements: {Kabir, Rahim, George, tablespoon}; where the first three elements are names of persons, and the fourth element is a utensil. The predicate "Poet(x)" means "x is a poet", and the predicate "Person(x)" means "x is a person". Here, the words "person" and "poet" have the conventional meanings. Then, which of the following would have a strong compliance with the given domain: *

- [x] ∀x. (Poet(x) -> Person(x))
- [ ] ∀x. (Poet(x) /\ Person(x))
- [x] ∃x. (Poet(x) /\ Person(x))
- [ ] ∀x. (Poet(x) \/ Person(x))

Consider the sentence: ∃x.(p(x) -> q(x)). Assume we are sure that there is no value of x for which q(x) is true. Is it still possible that the above statement is true? *

- (•) Yes
- ( ) No

Which of the following is/are true? *

- [x] Mapping from sentences to sentences comes under inference.
- [ ] Mapping from sentences to sentences comes under semantics.
- [ ] Mapping from sentences to facts comes under inference.
- [x] Mapping from sentences to facts comes under semantics.

Which of the following sentences can be translated into FOL? *

- [x] No purple mushroom is poisonous.
- [x] You can fool all of the people some of the time.
- [x] There are exactly two purple mushrooms.
- [x] You can fool some of the people all of the time.