Assignment 5

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1. In First Order Logic, an interpretation is a mapping between elements of the language and elements of a __________
   - A. representation
   - B. well-formed expression
   - C. individualization
   - D. meaninglessness

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** C. individualization

2. Consider which of the following statements are correct, i.e., satisfiability is a logical consequence:
   - University requires 30 points is satisfied by the course. The actual course is satisfied by the assignment of the quantified variable.
   - Existentially quantified sentence is satisfied if and only if the excluded sentence is satisfied for all assignments of the quantified variable.

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** C. individualization

3. Facts and roles that attempt to capture all of the important facts and concepts about a domain are referred to as __________
   - A. predicates
   - B. actions
   - C. domains
   - D. truth values

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** C. domains

4. Also known as existentialization, the __________ is a convenient way to reason about the unknown object, rather than the existential quantifier.
   - A. universal constant
   - B. universal variable
   - C. existential variable
   - D. existential constant

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** D. existential constant

5. A clause defined as a well-formed formula consisting of a __________ of literals.
   - A. disjunction
   - B. set
   - C. conjunction
   - D. atom

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** A. disjunction

6. If concepts are __________ helps immensely in search as it dramatically reduces the number of search strings that can be inferred from two input clauses.
   - A. conjunctive normal form
   - B. Most General Unifiers
   - C. Resolution
   - D. Search tree strategy

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** C. Resolution

7. Given below, α is a logical truth. The logical statement α → β is true, if β refers to __________
   - A. Everyone is loyal to everyone.
   - B. Someone is loyal to everyone.
   - C. Someone is loyal to everyone.
   - D. Someone is loyal to someone.

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** C. Someone is loyal to everyone.

8. An interpretation of a set of FOL sentences, such that every sentence is true, is a __________
   - A. model
   - B. satisfaction
   - C. formulism
   - D. proof

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** A. model

9. In First order logic, if a set of sentences is __________ then resolution will always be able to derive a contradiction.
   - A. unsatisfiable
   - B. conjunction of literals
   - C. disjunction of literals
   - D. satisfiable

   **No, the answer is incorrect.**
   - **Score:** 0
   - **Accepted Answer:**
     - **Option:** A. unsatisfiable

10. Given below, α is a lower. The logical statement α ∨ β is true, if β refers to __________
    - A. Everyone is loyal to everyone.
    - B. Everyone is loyal to someone.
    - C. Someone is loyal to everyone.
    - D. Someone is loyal to someone.

    **No, the answer is incorrect.**
    - **Score:** 0
    - **Accepted Answer:**
      - **Option:** C. Someone is loyal to everyone.