Assignment 2

The due date for submitting this assignment has passed.

As per our records, you have not submitted this assignment.

1. If the domain of $x$ is the set of words {red, blue, green, yellow, orange, red}, which of the following sentences is true?

- $x \text{ is red or blue}$
- $x \text{ is green or orange}$
- $x \text{ is blue or orange}$
- $x \text{ is red or blue or orange}$
- $x \text{ is red or blue or orange}$

No, the answer is incorrect.

2. If $A = \{a, b, c\}$, $B = \{d, e, f\}$, and $C = \{g, h, i\}$, which of the following sentences is true?

- $A \subseteq B$
- $B \subseteq C$
- $C \subseteq A$
- $A \cup B = C$
- $A \cap B = \emptyset$

No, the answer is incorrect.

3. Which of the following are logical consequences of $(x = y) \land (y = z) \rightarrow (x = z)$?

- $(x = y)$
- $(y = z)$
- $(x = z)$
- $x = y$
- $y = z$

No, the answer is incorrect.

4. Which of the following are logical consequences of $(x = y \land x = z) \rightarrow (x = y)$?

- $(x = y)$
- $(y = z)$
- $(x = z)$
- $y = x$
- $z = y$

No, the answer is incorrect.

5. In the following, the domain of $x$ is a set of students and the domain of $y$ is a set of courses. If $x$ stands for "student $x$ is in course $y$", Which of the following expresses the sentence: "No course is without students."

- $\forall y \exists x (x \in y)$
- $\exists x \forall y (x \in y)$
- $\forall y \exists x (x \in y)$
- $\forall y \exists x (x \in y \land x \in y)$
- $\forall y \exists x (x \in y)$

No, the answer is incorrect.

6. Which of the following is a logical consequence of $\forall x (x = y \lor y = x)$?

- $x = y$
- $y = x$
- $x = x$
- $x = y \land y = x$
- $x = y$

No, the answer is incorrect.

7. Which of the following is a logical consequence of $\forall x (x \in y \lor x \in z)$?

- $x \in y$
- $x \in z$
- $x \in y \lor x \in z$
- $\exists x (x \in y \lor x \in z)$
- $x \in y \lor x \in z$

No, the answer is incorrect.