**Supremum and infimum**

**LATEST SUBMISSION GRADE**

0%

**1.Question 1**

**Let (*A*, *B*) be the object concept of “cola” and (*C*, *D*) be the object concept of “champagne”. Which objects are in the extent of (*A*, *B*) ∨ (*C*, *D*)?**

**A close up of a map

Description automatically generated**

mineral water

**Correct**

The supremum of the two object concepts covers all the objects that have all the attributes shared by cola and champagne. In other words, it covers all the sparkling beverages, and mineral water is one of them.

wine

**This should not be selected**

The supremum of the two object concepts covers all the objects that have all the attributes shared by cola and champagne. These don't include wine, which is not sparkling.

cola

**Correct**

Every object is always in the extent of the supremum of its object concept and any other concept.

coffee

**This should not be selected**

The supremum of the two object concepts covers all the objects that have all the attributes shared by cola and champagne. These don't include coffee, which is not sparkling.

champagne

**Correct**

Every object is always in the extent of the supremum of its object concept and any other concept.

herb tea

**This should not be selected**

The supremum of the two object concepts covers all the objects that have all the attributes shared by cola and champagne. These don't include herb tea, which is not sparkling.

**0 / 1 point**

**2.Question 2**

**Let (*A*, *B*) = ({champagne}*''*, {champagne}*'*), (*C*, *D*) = ({mineral water}*''*, {mineral water}*'*), and (*E*, *F*) = ({caffeinic}*'*, {caffeinic}*''*). Which attributes are in the intent of ((*A*, *B*) ∨ (*C*, *D*)) ∧ (*E*, *F*)?**

**A close up of a map

Description automatically generated**

caffeinic

**Correct**

The intent of the infimum of an attribute concept and another concept always includes this attribute.

hot

**This should not be selected**

This concept covers cola, which is not hot.

beverage

**Correct**

Every concept of this lattice has "beverage" in its intent.

alcoholic

**This should not be selected**

The resulting concept is the concept of cola, and cola is not alcoholic.

sparkling

**Correct**

The resulting concept is the concept of cola, and cola is sparkling.

nonalcoholic

**Correct**

The resulting concept is the concept of cola, and cola is nonalcoholic.

**0 / 1 point**

**3.Question 3**

**Let (*A*, *B*) = ({champagne}*''*, {champagne}*'*), (*C*, *D*) = ({mineral water}*''*, {mineral water}*'*), and (*E*, *F*) = ({caffeinic}*'*, {caffeinic}*''*). Is the following statement true?**

**A close up of a map

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**((*A*, *B*) ∨ (*C*, *D*)) ∧ (*E*, *F*) = (*A*, *B*) ∨ ((*C*, *D*) ∧ (*E*, *F*))**

Yes

No

**Incorrect**