

## 338.001, VL Logic, Martina Seidl / Wolfgang Schreiner / Wolfgang Windsteiger, 2022W

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## Quiz navigation



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Started on	Monday, 24 October 2022, 7:15 PM
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Time taken	11 mins 35 secs
Grade	2.83 out of 5.00 (56.67%)

## Question 1

Partially correct

Mark 0.33 out of 2.00

Flag question

Which of the following formulas are subformulas of

 $(a \rightarrow \neg(\neg b \vee \neg c)) \vee (a \wedge b \vee c) \wedge d$ ?

Select one or more:

- ☐ 1.  $a \wedge b$
- ☒ 2.  $(a \rightarrow \neg(\neg b \vee \neg c)) \wedge d$  ✗
- ☐ 3.  $b \vee c$
- ☒ 4.  $(a \rightarrow \neg(\neg b \vee \neg c)) \vee (a \wedge b \vee c) \wedge d$  ✓
- ☐ 5.  $a \wedge b \vee c$

Die Antwort ist teilweise richtig.

You have correctly selected 1.

The correct answers are:  $a \wedge b$ ,  $a \wedge b \vee c$ ,  $(a \rightarrow \neg(\neg b \vee \neg c)) \vee (a \wedge b \vee c) \wedge d$ 

## Question 2

Partially correct

Mark 1.50 out of 2.00

Flag question

Which of the following statements hold?

Select one or more:

- ☒ 1.  $\neg(b \vee \neg c) \Leftrightarrow (\neg b \wedge c) \vee \perp$  ✓
- ☐ 2.  $a \wedge (b \vee a) \Leftrightarrow b$
- ☒ 3.  $\neg(b \vee \neg \perp) \Leftrightarrow (\neg b \vee \perp)$  ✗
- ☒ 4.  $\neg a \wedge (b \vee \neg c) \Leftrightarrow (\neg a \wedge b) \vee (\neg a \wedge \neg c)$  ✓

Die Antwort ist teilweise richtig.

You have selected too many options.

The correct answers are:  $\neg a \wedge (b \vee \neg c) \Leftrightarrow (\neg a \wedge b) \vee (\neg a \wedge \neg c)$ ,  $\neg(b \vee \neg c) \Leftrightarrow (\neg b \wedge c) \vee \perp$ 

## Question 3

Correct

Mark 1.00 out of 1.00

Flag question

Given formulas  $\psi_1$ ,  $\psi_2$ ,  $\psi_3$  over variables  $x$ ,  $y$ ,  $z$  as defined in the truth table below.

x	y	z	$\psi_1$	$\psi_2$	$\psi_3$
0	0	0	1	0	
0	0	1	0	1	0
0	1	0	1	0	
0	1	1	0	1	0
1	0	0	1	0	
1	0	1	0	1	0
1	1	0	1	0	
1	1	1	1	0	

Which statements hold?

Select one or more:

- ☒ 1.  $\neg\psi_3$  is valid. ✓
- ☒ 2.  $\psi_1$  is satisfiable. ✓
- ☐ 3.  $\psi_2 \wedge \psi_3$  is satisfiable.

Die Antwort ist richtig.

The correct answers are:  $\neg\psi_3$  is valid.,  $\psi_1$  is satisfiable.

