Quiz 4

Instructions

This quiz is based on propositional logic. It is closed book and notes.

This quiz was locked May 10 at 10:30am.

Attempt History

	Attempt	Time	Score
LATEST	**Attempt 1**	10 minutes	2.33 out of 5

Score for this quiz: **2.33** out of 5
Submitted May 10 at 10:10am
This attempt took 10 minutes.

Question 1   1 / 1 pts

A knowledge base KB entails a sentence S if and only if

    ◯ The models of KB are identical to the models of S

    ◯ The models of KB and the models of S overlap

Correct!   ◉ The models of KB are a subset of the models of S

○ The models of S are a subset of the models of KB

Question 2   **0 / 1 pts**

Which of the following claims is true for the propositional sentence: $(\neg P \vee \neg Q) \wedge (P \vee Q) \wedge (\neg P \vee Q)$

Correct Answer
○ The sentence is satisfiable but not valid

○ The sentence is both valid and satisfiable

You Answered
⦿ The sentence is neither satisfiable nor valid

○ The sentence is valid but not satisfiable

Question 3   **0.67 / 1 pts**

Indicate all of the following sentences which are equivalent to the sentence $P \Leftrightarrow Q$

Correct!
☑ $(P \wedge Q) \vee (\neg P \wedge \neg Q)$

Correct!
☑ $(P \Rightarrow Q) \wedge (Q \Rightarrow P)$

Correct!
☑ $(\neg P \vee Q) \wedge (\neg Q \vee P)$

You Answered
☑ $(P \vee Q) \wedge (\neg P \vee \neg Q)$

Question 4

0.67 / 1 pts

Which of the following inference rules are sound?

$\dfrac{Q, P \Rightarrow Q}{P}$

$\dfrac{P \lor Q, \neg Q \lor R}{P \lor R}$

☑ $\dfrac{P, Q}{P \land Q}$

☑ $\dfrac{P, P \Rightarrow Q}{Q}$

Question 5

0 / 1 pts

Which of the following sentences completely and correctly represents what we know about breeze in cell (1,1) in the Wumpus world?

⦿ $B_{1,1} \Leftrightarrow (P_{1,2} \land P_{2,1})$

○ $B_{1,1} \Leftrightarrow (P_{1,2} \lor P_{2,1})$

○ $(P_{1,2} \lor P_{2,1}) \Rightarrow B_{1,1}$

$B_{1,1} \Rightarrow (P_{1,2} \lor P_{2,1})$