8.10 Valuing a Derivative Using a One-Period Binomial Model

Question 1
An assumption of the binomial option pricing model is *most likely*:
A. the underlying can take on any value at the end of the period.
B. an option and its underlying can be used to create a hedged portfolio.
C. the actual probabilities of movements in the underlying are required by the model.

Question 2
An analyst is using a one-period binomial model to value a European call option on a stock. The option payoff at the end of the period if the stock price goes up is *most likely* determined by:
A. the up value of the stock minus the strike price.
B. the strike price minus the down value of the stock.
C. the expected value of the call's payoffs using risk-neutral probabilities.

Question 3
The current value of an option determined using a one-period binomial model is *best* described as its values in one period weighted by the:
A. risk-neutral up and down probabilities.
B. probabilities of up and down moves discounted by the risk-free rate.
C. risk-neutral up and down probabilities discounted by the risk-free rate.

Question 4
A one-period binomial pricing model is used to value a European call option on a stock. According to the model, the risk-neutral probabilities are those for which the expected return on a call is *most likely*:
A. zero.
B. the risk-free rate.
C. greater than the risk-free rate

Question 5
Which of the following assumptions is *least likely* to be valid when pricing options using the binomial pricing model?
A. Option prices are premised on investors being risk averse.
B. Actual probability of the underlying's up and down moves is unknown.
C. Volatility of the underlying determines the underlying's up and down moves.