




Question #1 of 62

James Anthony has a short position in a put option with a strike price of \$94. If the stock price is below \$94 at expiration, what will happen to Anthony's short position in the option?

- A) He will have the option exercised against him at \$94 by the person who is long the put option. 
- B) The person who is long the put option will not exercise the put option. 
- C) He will let the option expire. 

Explanation

Anthony has *sold the right to sell the stock* at \$94. That is, he received a payment upfront for the payer to have the right but not the obligation to sell the stock at \$94. Because the option is in-the-money at expiration, $\text{MAX}(0, X-S)$, the holder will exercise his right to sell at \$94.

(Study Session 18, Module 57.3, LOS 57.j)

Question #2 of 62

On the expiration date of a European put option, if the spot price of the underlying asset is less than the exercise price, the value of the option is:

- A) zero. 
- B) positive. 
- C) negative. 




Explanation

Put options are in the money (have positive value) at expiration if the spot price of the underlying asset is less than the exercise price, because the put option holder has the right to sell the asset for the higher exercise price. The value of an option cannot be negative; at expiration its value is the greater of zero or its intrinsic value.

(Study Session 18, Module 57.3, LOS 57.i)

Question #3 of 62

During its life the value of a long position in a forward or futures contract:

- A) is opposite to the value of the short position. 
- B) is equal to the value of the short position. 
- C) can differ in size from the value of the short position. 




Explanation

The long and short positions in a forward or futures contract have opposite values. A gain for one is an equal-sized loss for the other.

(Study Session 18, Module 57.1, LOS 57.b)

Question #4 of 62

At expiration, the value of a European call option is:

- A) equal to the asset price minus the present value of the exercise price. 
- B) less than that of an otherwise identical American call option. 
- C) equal to its intrinsic value. 




Explanation

The intrinsic value of a call, either European or American, at expiration is $\text{Max}(0, S - X)$, which is its intrinsic value. The asset price minus the present value of the exercise price can be negative, but options cannot have a negative value.

(Study Session 18, Module 57.3, LOS 57.i)

Question #5 of 62

At expiration, the value of a call option is the greater of zero or the:

- A) underlying asset price minus the exercise value. 
- B) underlying asset price minus the exercise price. 
- C) exercise price minus the exercise value. 




Explanation

The value of a call option at expiration is its exercise value, which is $\text{Max}[0, S - X]$.

(Study Session 18, Module 57.3, LOS 57.i)

Question #6 of 62

Which of the following *most accurately* states an example of replication in derivatives pricing?

- A) Risky asset + risk-free asset = (– derivative position). 
- B) Derivative position – risk-free asset = risky asset. 
- C) Risky asset + derivative = risk-free asset. 

Explanation

Replications of future payoffs, composed of a risky asset, a risk-free asset, and a derivative on the risky asset, are as follows:

Risky asset + derivative = risk-free asset

Risky asset – risk-free asset = (– derivative position)

Derivative position – risk-free asset = (– risky asset).

(Study Session 18, Module 57.1, LOS 57.a)

Question #7 of 62

A call option that is in the money:

- A) has an exercise price less than the market price of the asset.
- B) has an exercise price greater than the market price of the asset.
- C) has a value greater than its purchase price.



Explanation

A call option is in the money when the exercise price is less than the market price of the asset.

(Study Session 18, Module 57.3, LOS 57.j)

Question #8 of 62

Bidco Corporation common stock has a market value of \$30.00. Which statement about put and call options available on Bidco common is *most* accurate?

- A) A put with a strike price of \$35.00 is in-the-money.
- B) A put with a strike price of \$20.00 has intrinsic value.
- C) A call with a strike price of \$25.00 is at-the-money.



Explanation

A put is in-the-money when its exercise price is higher than the market value of the underlying asset. A put with a \$35.00 strike price allows the trader to sell 100 shares of stock for \$35.00 per share, which is \$5.00 higher than the prevailing market value. This gives the put a value, hence, it is in-the-money. For a call to be in-the-money, its strike price would have to be lower than the market value of the underlying common stock, allowing the trader to purchase 100 shares at a price below the prevailing market value. At-the-money is when the strike price and asset market value are equal. A put with a strike price of \$20.00 does not have intrinsic value because it is below the \$30 price of the stock. It does have time value meaning it is worth something because there is the possibility the put will come into the money before it expires.

(Study Session 18, Module 57.3, LOS 57.j)

Question #9 of 62

If futures prices are positively correlated with interest rates, futures prices will be:

- A) unaffected relative to forward prices.
- B) greater than forward prices.
- C) less than forward prices.



Explanation

Futures prices will be greater than forward prices if interest rates are positively correlated with futures prices, because daily settlement of long futures positions will produce excess margin when interest rates are high and require margin deposits when interest rates are low.

(Study Session 18, Module 57.2, LOS 57.f)

Question #10 of 62

Consider a European call option and put option that have the same exercise price, and a forward contract to buy the same underlying asset as the two options. An investor buys a risk-free bond that will pay, on the expiration date of the options and the forward contract, the difference between the exercise price and the forward price. According to the put-call-forward parity relationship, this bond can be replicated by:

- A) writing the call option and writing the put option.
- B) buying the call option and writing the put option.
- C) writing the call option and buying the put option.



Explanation

The put-call-forward parity relationship may be expressed as:

$$p_0 - c_0 = [X - F_0(T)] / (1 + R_f)^T$$

That is, at initiation of a forward contract on the underlying asset, buying a put option and writing a call option with exercise price X will have the same cost as a risk-free bond which, at expiration of the forward and options, will pay the difference between X and the forward price.

(Study Session 18, Module 57.3, LOS 57.m)

Question #11 of 62

Using put-call parity, it can be shown that a synthetic European put can be created by a portfolio that is:

- A) short the stock, long the call, and long a pure discount bond that pays the exercise price at option expiration.
- B) long the stock, short the call, and short a pure discount bond that pays the exercise price at option expiration.
- C) short the stock, long the call, and short a pure discount bond that pays the exercise price at option expiration.



Explanation

A short position in the stock combined with a long call and lending the present value of the exercise price will replicate the payoffs on a put at option expiration.

(Study Session 18, Module 57.3, LOS 57.l)

Question #12 of 62

The underlying instrument in a forward rate agreement is:

- A) a fixed-income security.
- B) an asset.
- C) an interest rate.



Explanation

A forward rate agreement is a forward contract with an interest rate, such as 30-day LIBOR, as its underlying instrument.

(Study Session 18, Module 57.2, LOS 57.e)

Question #13 of 62

For an underlying asset that has no holding costs or benefits, the value of a forward contract to the long during the life of the contract is the:

- A) spot price minus the present value of the forward price. ✓
- B) difference between the spot price and the forward price. ✗
- C) present value of the difference between the spot price and the forward price. ✗

Explanation

During the life of a forward contract on an underlying asset with no holding costs or benefits, the value to the long equals the spot price minus the present value of the forward price:

$$V_t(T) = S_t - F_0(T) / (1 + R_f)^{T-t}.$$

(Study Session 18, Module 57.1, LOS 57.c)

Question #14 of 62

Which of the following instruments is a component of the put-call-forward parity relationship?

- A) The present value of the forward price of the underlying asset. ✓
- B) The future value of the forward price of the underlying asset. ✗
- C) The spot price of the underlying asset. ✗

Explanation

The put-call-forward parity relationship is: $F_0(T) / (1 + RFR)^T + p = c + X / (1 + RFR)^T$, where $F_0(T)$ is the forward price of the underlying asset.

(Study Session 18, Module 57.3, LOS 57.m)

Question #15 of 62

Which of the following statements about long positions in put and call options is *most* accurate? Profits from a long call:

- A) are positively correlated with the stock price and the profits from a long put are negatively correlated with the stock price. ✓
- B) are negatively correlated with the stock price and the profits from a long put are positively correlated with the stock price. ✗
- C) and a long put are positively correlated with the stock price. ✗

Explanation

For a call, the buyer's (or the long position's) potential gain is unlimited. The call option is in-the-money when the stock price (S) exceeds the strike price (X). Thus, the buyer's profits are positively correlated with the stock price. For a put, the buyer's (or the long position's) potential gain is equal to the strike price less the premium. A put option is in-the-money when $X > S$. Thus, a put buyer wants a high exercise price and a low stock price. Thus, the buyer's profits are negatively correlated with the stock price.

(Study Session 18, Module 57.3, LOS 57.k)

Question #16 of 62

It is possible to profit from arbitrage when there are no costs or benefits to holding the underlying asset and the forward contract price is:

- A) less than the present value of the spot price.
- B) less than the future value of the spot price.
- C) greater than the present value of the spot price.



Explanation

An opportunity for arbitrage exists if the forward price is not equal to the future value of the spot price, compounded at the risk-free rate over the period of the forward contract.

(Study Session 18, Module 57.1, LOS 57.c)

Question #17 of 62

As a forward contract approaches its expiration date, its value:

- A) increases to the forward contract price.
- B) approaches zero.
- C) depends on the price of the underlying asset.



Explanation

The value of a forward contract is zero at initiation, and during its life its value depends on changes in the spot price of the underlying asset. At expiration its value is based on the difference between the spot price of the underlying asset and the price specified in the forward contract.

(Study Session 18, Module 57.1, LOS 57.b)

Question #18 of 62

If the price of a forward contract is greater than the price of an identical futures contract, the most likely explanation is that:

- A) the forward contract is more liquid.
- B) the futures contract is more difficult to exit.
- C) the futures contract requires daily settlement.



Explanation

The reason there may be a difference in price between a forward contract and an identical futures contract is that a futures position has daily settlement and so makes or requires cash flows during its life.

(Study Session 18, Module 57.2, LOS 57.f)

Question #19 of 62

Greater volatility in the price of the underlying asset will have what effect on the value of a call option and the value of a put option?

<u>Value of a call option</u>	<u>Value of a put option</u>	
A) Increase	Decrease	✗
B) Increase	Increase	✓
C) Decrease	Increase	✗

Explanation

Greater volatility in the price of the underlying asset increases the values of both puts and calls because options are "one-sided." Since an option's value can fall no lower than zero (it expires out of the money), increased volatility increases an option's upside potential but does not increase its downside exposure.

(Study Session 18, Module 57.3, LOS 57.k)

Question #20 of 62

A forward rate agreement (FRA):

- A) can be used to hedge the interest rate exposure of a floating-rate loan. ✓
- B) is settled by making a loan at the contract rate. ✗
- C) is risk-free when based on the Treasury bill rate. ✗

Explanation

An FRA settles in cash and carries both default risk and interest rate risk, even when based on an essentially risk-free rate. It can be used to hedge the risk/uncertainty about a future payment on a floating rate loan.

(Study Session 18, Module 57.2, LOS 57.e)

Question #21 of 62

A fiduciary call is a portfolio that is made up of:

- A) a call option and a share of stock. ✗
- B) a call that is synthetically created from other instruments. ✗

C) a call option and a bond that pays the exercise price of the call at option expiration.



Explanation

A fiduciary call combines a call option and a bond that pays the exercise price of the call at option expiration.

(Study Session 18, Module 57.3, LOS 57.I)

Question #22 of 62

Which of the following statements about moneyness is *most* accurate? When the stock price is:

A) above the strike price, a put option is out-of-the-money.



B) above the strike price, a put option is in-the-money.



C) below the strike price, a call option is in-the-money.



Explanation

When the stock price is above the strike price, a put option is *out-of-the-money*.

When the stock price is below the strike price, a call option is *out-of-the-money*.

(Study Session 18, Module 57.3, LOS 57.j)

Question #23 of 62

Which of the following is typically equal to zero at the initiation of an interest rate swap contract?

A) Neither its value nor its price.



B) Its price.



C) Its value.



Explanation

As with other derivatives, the price of an interest rate swap (the fixed rate specified in the contract) is typically set such that the value of the swap is zero at initiation.

(Study Session 18, Module 57.2, LOS 57.h)

Question #24 of 62

Other things equal, the no-arbitrage forward price of an asset will be higher if the asset has:

A) convenience yield.



B) storage costs.



C) dividend payments.



Explanation

Costs of holding an asset increase its no-arbitrage forward price. Benefits from holding the asset, such as dividends or convenience yield, decrease its no-arbitrage forward price.

(Study Session 18, Module 57.1, LOS 57.d)

Question #25 of 62

Compared to European put options on an asset, otherwise identical American put options on the asset are *most likely* to be more valuable if:

A) the asset value is significantly lower than the exercise price.



B) the asset pays dividends during the life of the option.



C) the options are out-of-the-money.



Explanation

Early exercise of an in-the-money American put option is valuable when the asset value is significantly below the exercise price (i.e. they are deep in-the money). The payment of interest or dividends from the underlying asset increases put values, so it does not make early exercise valuable as it does with call options.

(Study Session 18, Module 57.4, LOS 57.o)

Question #26 of 62

Given the following data regarding Printer, Inc.'s call options, which of the following statements is *least* accurate?

Stock Price	Expiration	Strike	Option Prem. (Last)
50	June	45	6
50	June	50	2
50	June	55	0.50

A) The intrinsic value of the June \$45.00 call is \$5.00.



B) The June \$55.00 call is an in-the-money option.



C) The June \$45.00 call is an in-the-money option.



Explanation

The June \$55.00 call option is out-of-the money. It gives the purchaser the right to buy Printer, Inc. for \$55.00 when they would only have to pay \$50.00 in the market.

(Study Session 18, Module 57.3, LOS 57.j)

Question #27 of 62

Which of the following will increase the value of a call option?

A) A dividend on the underlying asset.



B) An increase in the exercise price.



C) An increase in volatility.



Explanation

Increased volatility of the underlying asset increases both put values and call values. A higher exercise price or an increase in cash flows on the underlying asset decrease the value of a call option.

(Study Session 18, Module 57.3, LOS 57.k)

Question #28 of 62

Which of the following is a nonmonetary benefit of holding an asset?

A) Storage and insurance.



B) Dividends.



C) Convenience yield.



Explanation

Convenience yield refers to the nonmonetary benefits of holding an asset. Dividends are a monetary benefit. Storage and insurance are costs of holding an asset.

(Study Session 18, Module 57.1, LOS 57.d)

Question #29 of 62

The relationship referred to as put-call-forward parity states that at time = 0, if there is no arbitrage opportunity, the value of a call at X on an asset that has no holding costs or benefits plus the present value of X is equal to:

A) the value of a put option at X plus the present value of the forward contract price.



B) the asset price minus the value of a put option at X.



C) the forward contract price plus the value of a put option at X.



Explanation

The put-call-forward parity relationship is:

$$c_0 + X/(1 + Rf)^T = p_0 + F_0(T)/(1 + Rf)^T$$

The value of a call at X plus the present value of X is equal to the value of a put option at X plus the present value of the forward contract price.

(Study Session 18, Module 57.3, LOS 57.m)

Question #30 of 62

For an underlying asset that has no holding costs or benefits, the no-arbitrage forward price at initiation of a forward contract is:

- A) the future value of the spot price.
- B) equal to the spot price.
- C) zero.



Explanation

At initiation of a forward contract on an underlying asset with no holding costs or benefits, the no-arbitrage forward price is the future value of the spot price, compounded at the risk-free rate to the expiration date of the forward contract: $F_0(T) = S_0(1 + Rf)^T$. The forward contract has a *value* of zero at initiation if the forward price in the contract is equal to the no-arbitrage forward price.

(Study Session 18, Module 57.1, LOS 57.c)

Question #31 of 62

The price of a pay-fixed receive-floating interest rate swap is:

- A) determined by expected future short-term rates.
- B) negative when floating rates are highly volatile.
- C) zero when floating rates and fixed rates are equal.



Explanation

The price of an interest rate swap refers to the fixed rate specified in the swap. This price is calculated as a function of expected future short-term rates.

(Study Session 18, Module 57.2, LOS 57.h)

Question #32 of 62

A call option's intrinsic value:

- A) increases as the stock price increases above the strike price, while a put option's intrinsic value increases as the stock price decreases below the strike price.
- B) increases as the stock price increases above the strike price, while a put option's intrinsic value decreases as the stock price decreases below the strike price.
- C) decreases as the stock price increases above the strike price, while a put option's intrinsic value increases as the stock price decreases below the strike price.



Explanation

For a call option, as the underlying stock price increases above the strike price, the option moves farther into the money, and the intrinsic value is increasing. For a put option, as the underlying stock price decreases below the strike price, the option moves farther into the money, and the intrinsic value is increasing.

(Study Session 18, Module 57.3, LOS 57.k)

Question #33 of 62

For a series of forward contracts to replicate a swap contract, the forward contracts must have:

- A) values at swap initiation that are equal to zero.
- B) values at swap expiration that sum to zero.
- C) values at swap initiation that sum to zero.



Explanation

When replicating a swap with a series of forward contracts, each forward contract is likely to be off-market (i.e., have a non-zero value at initiation), but they can replicate a swap with a value of zero at initiation if the values of the forward contracts sum to zero at swap initiation.

(Study Session 18, Module 57.2, LOS 57.g)

Question #34 of 62

An increase in the riskless rate of interest, other things equal, will:

- A) increase call option values and decrease put option values.
- B) decrease call option values and decrease put option values.
- C) decrease call option values and increase put option values.



Explanation

An increase in the risk-free rate of interest will increase call option values and decrease put option values.

(Study Session 18, Module 57.3, LOS 57.k)

Question #35 of 62

A synthetic European put option includes a short position in:

- A) a European call option.
- B) the underlying asset.
- C) a risk-free bond.



Explanation

A synthetic European put option consists of a long position in a European call option, a long position in a risk-free bond that pays the exercise price on the expiration date, and a short position in the underlying asset.

(Study Session 18, Module 57.3, LOS 57.l)

Question #36 of 62

An investor would exercise a put option when the:

A) price of the stock is above the strike price.



B) price of the stock is below the strike price.



C) price of the stock is equal to the strike price.



Explanation

A put option gives its owner the right to sell the underlying good at a specified price (strike price) for a specified time period. When the stock's price is less than the strike price a put option has value and is said to be *in-the-money*.

(Study Session 18, Module 57.3, LOS 57.j)

Question #37 of 62

For two European put options that differ only in their time to expiration, which of the following is *most* accurate? The longer-term option:

A) is worth at least as much as the shorter-term option.



B) can be worth less than the shorter-term option.



C) is worth more than the shorter-term option.



Explanation

For European puts, it is possible that the longer term option can be less valuable than a shorter-term option.

(Study Session 18, Module 57.3, LOS 57.k)

Question #38 of 62

The *most likely* use of a forward rate agreement is to:

A) exchange a floating-rate obligation for a fixed-rate obligation.



B) lock in an interest rate for future borrowing or lending.



C) obtain the right, but not the obligation, to borrow at a certain interest rate.



Explanation

The purpose of a forward rate agreement (FRA) is to lock in an interest rate for future borrowing or lending. An FRA is a forward commitment rather than a contingent claim. An interest rate swap is used to exchange a floating-rate obligation for a fixed-rate obligation.



(Study Session 18, Module 57.2, LOS 57.e)

Question #39 of 62

Using put-call parity, it can be shown that a synthetic European call can be created by a portfolio that is:

A) long the stock, short the put, and short a pure discount bond that pays the exercise price at option expiration.



- B)** long the stock, long the put, and short a pure discount bond that pays the exercise price at option expiration. 
- C)** long the stock, long the put, and long a pure discount bond that pays the exercise price at option expiration. 




Explanation

A stock and a put combined with borrowing the present value of the exercise price will replicate the payoffs on a call at option expiration.

(Study Session 18, Module 57.3, LOS 57.I)

Question #40 of 62

A put option is in the money when:

- A)** the stock price is higher than the exercise price of the option. 
- B)** the stock price is lower than the exercise price of the option. 
- C)** there is no put option with a lower exercise price in the expiration series. 




Explanation

The put option is in-the-money if the stock price is below the exercise price.

(Study Session 18, Module 57.3, LOS 57.j)

Question #41 of 62

Derivatives valuation is based on risk-neutral pricing because:

- A)** risk tolerances of long and short investors are assumed to offset. 
- B)** this method provides an intrinsic value to which investors apply a risk premium. 
- C)** the risk of a derivative is based entirely on the risk of its underlying asset. 

Explanation

Because the risk of a derivative is based entirely on the risk of its underlying asset, we can construct a perfectly hedged portfolio of a derivative and its underlying asset. The future payoff of a perfectly hedged position is certain and can therefore be discounted at the risk-free rate.

(Study Session 18, Module 57.1, LOS 57.a)

Question #42 of 62

An analyst is determining the value of a put option with a one-period binomial model. Using an up-move size of 25% and a risk-free rate of 3%, the analyst calculates the following:

Down-move size = 0.80

Up-move probability = 0.51

Down-move probability = 0.49

Value after up-move = \$1.07

Value after down-move = \$5.01

Probability-weighted average = $0.51(\$1.07) + 0.49(\$5.01) = \$3.00$

The analyst should determine that the value of the put option is:

A) greater than \$3.00.



B) less than \$3.00.



C) equal to \$3.00.



Explanation

The probability-weighted average is an estimate of the option's expected value after one period. To determine the option's value the analyst must discount this expected value by one period.

(Study Session 18, Module 57.4, LOS 57.n)

Question #43 of 62

One of the principal characteristics of swaps is that swaps:

A) may be likened to a series of forward contracts.



B) are highly regulated over-the-counter agreements.



C) are standardized derivative instruments.



Explanation

A swap agreement often requires that both parties agree to a series of transactions. Each transaction is similar to a forward contract, where a party is paying a fixed price to offset the risk associated with an unknown future value. Swaps are over-the-counter agreements but are not highly regulated. One of the benefits of swaps is that they can be customized to fit the needs of the counterparties. Thus, they are not standardized.

(Study Session 18, Module 57.2, LOS 57.g)

Question #44 of 62

An option's intrinsic value is equal to the amount the option is:

A) in the money, and the time value is the market value minus the intrinsic value.



B) in the money, and the time value is the intrinsic value minus the market value.



C) out of the money, and the time value is the market value minus the intrinsic value.



Explanation

Intrinsic value is the amount the option is in the money. In effect it is the value that would be realized if the option were at expiration. Prior to expiration, the option's market value will normally exceed its intrinsic value. The difference between market value and intrinsic value is called time value.

(Study Session 18, Module 57.3, LOS 57.j)

Question #45 of 62

The calculation of derivatives values is based on an assumption that:

A) arbitrage opportunities are exploited rapidly.



B) arbitrage opportunities do not arise in real markets.



C) investors are risk neutral.



Explanation

Derivatives valuation is based on the assumption that any arbitrage opportunities in financial markets are exploited rapidly so that assets with identical cash flows are forced toward the same price. It does not assume arbitrage opportunities do not arise or that investors are risk neutral.

(Study Session 18, Module 57.1, LOS 57.a)

Question #46 of 62

The value of a forward or futures contract is:

A) specified in the contract.



B) typically zero at initiation.



C) equal to the spot price at expiration.



Explanation

The value of a forward or futures contract is typically zero at initiation, and at expiration is the difference between the spot price and the contract price. The *price* of a forward or futures contract is defined as the price specified in the contract at which the two parties agree to trade the underlying asset on a future date.

(Study Session 18, Module 57.1, LOS 57.b)

Question #47 of 62

Dividends or interest paid by the asset underlying a call option:

A) decrease the value of the option.



B) have no effect on the value of the option.



C) increase the value of the option.



Explanation

Dividends or interest paid by the underlying asset decrease the value of call options.

(Study Session 18, Module 57.3, LOS 57.k)

Question #48 of 62

A European call option on a stock has an exercise price of 42. On the expiration date, the stock price is 40.

The value of the option at expiration is:

A) zero.



B) negative.



C) positive.



Explanation

For a call option, the value at expiration is zero if the price of the underlying is less than or equal to the exercise price. The holder will allow the option to expire unexercised.

(Study Session 18, Module 57.3, LOS 57.i)

Question #49 of 62

The intrinsic value of an option is equal to:

A) zero or the amount that it is in the money.



B) the amount that it is in or out of the money.



C) its speculative value.



Explanation

The intrinsic value of an option is equal to the amount that it is in the money or zero, if it is out of the money. Option value equals speculative (time) value only for out-of-the-money options.

(Study Session 18, Module 57.3, LOS 57.j)

Question #50 of 62

Bea Moran wants to establish a long derivatives position in a commodity she will need to acquire in six months. Moran observes that the six-month forward price is 45.20 and the six-month futures price is 45.10.

This difference *most likely* suggests that for this commodity:

A) futures prices are negatively correlated with interest rates.



B) there is an arbitrage opportunity among forward, futures, and spot prices.



C) long investors should prefer futures contracts to forward contracts.



Explanation

Differences may exist between forward and futures prices for otherwise identical contracts if futures prices are correlated with interest rates. If futures prices are negatively correlated with interest rates, daily settlement of long futures contracts will require cash when interest rates are increasing and produce cash when interest rates are decreasing. As a result the futures price will be lower than the forward price. The difference in price does not provide an arbitrage opportunity or suggest that investors should prefer forward or futures contracts.

(Study Session 18, Module 57.2, LOS 57.f)

Question #51 of 62

Compared to an American call option on a stock that does not pay a dividend, an otherwise identical European call option will have:

- A) a lower value.
- B) the same value.
- C) a higher value.



Explanation

For call options on an underlying asset that does not pay cash flows, the right to exercise early is not valuable and therefore American and European options that are otherwise identical will have the same value.

(Study Session 18, Module 57.4, LOS 57.o)

Question #52 of 62

Which of the following statements about American and European options is most accurate?

- A) There will always be some price difference between American and European options because of exchange-rate risk.
- B) Prior to expiration, an American option may have a higher value than an equivalent European option.
- C) European options allow for exercise on or before the option expiration date.



Explanation

American and European options both give the holder the right to exercise the option at expiration. An American option also gives the holder the right of early exercise, so American options will be worth more than European options when the right to early exercise is valuable, and they will have equal value when it is not.

(Study Session 18, Module 57.4, LOS 57.o)

Question #53 of 62

Basil, Inc., common stock has a market value of \$47.50. A put available on Basil stock has a strike price of \$55.00 and is selling for an option premium of \$10.00. The put is:

A) out-of-the-money by \$2.50.



B) in-the-money by \$10.00.



C) in-the-money by \$7.50.



Explanation

The put allows a trader to sell Basil common stock for \$7.50 more than the current market value (\$55.00 – \$47.50). The trade is normally closed out with a cash settlement, but the trader could buy 100 shares for \$47.50 per share and immediately sell them to the option writer for \$55.00.

(Study Session 18, Module 57.3, LOS 57.j)

Question #54 of 62

Consider a put option on Deter, Inc., with an exercise price of \$45. The current stock price of Deter is \$52. What is the intrinsic value of the put option, and is the put option at-the-money or out-of-the-money?

	<u>Intrinsic Value</u>	<u>Moneyness</u>	
A)	\$7	At-the-money	
B)	\$7	Out-of-the-money	
C)	\$0	Out-of-the-money	

Explanation

The option has an intrinsic value of \$0, because the stock price is above the exercise price. Put value is $\text{MAX}(0, X - S)$. Equivalently, the option is out-of-the-money.

(Study Session 18, Module 57.3, LOS 57.j)

Question #55 of 62

A one-period binomial model is useful for valuing options because it:

A) does not require an assumption about volatility.



B) considers the additional risk inherent in options.



C) can account for contingent payoffs of options.



Explanation


Binomial models are used to value options because they can account for contingent payoffs (i.e., the exercise value after an up-move or down-move in the underlying asset price). The size of an up-move in a binomial model represents an assumption about the volatility of the underlying asset price. Binomial models can use risk-neutral pseudo-probabilities and thereby use the risk-free rate to discount the expected future payoff.

(Study Session 18, Module 57.4, LOS 57.n)

Question #56 of 62

The price of a fixed-for-floating interest rate swap contract:

A) is directly related to changes in the floating rate. 

B) is established at contract initiation. 

C) may vary over the life of the contract. 


Explanation

The price of a swap contract is set such that the contract has a value of zero at initiation. The *value* of a fixed-for-floating interest rate swap contract may vary over its life as the floating rate changes.


(Study Session 18, Module 57.2, LOS 57.h)

Question #57 of 62

When calculating the payoff for a stock option, if the stock price is greater than the strike price at expiration:

A) a call option expires worthless. 

B) the payoff to a put option is equal to the strike price. 

C) the payoff to a call option is the difference between the stock price and the strike price. 

Explanation


If the stock price is greater than the strike price at expiration, the payoff to a call option on the stock equals the stock price minus the strike price, while a put option on the stock expires worthless.


(Study Session 18, Module 57.3, LOS 57.j)

Question #58 of 62

When interest rates and futures prices for an asset are uncorrelated and forwards are less liquid than futures, it is *most likely* that the price of a forward contract is:

A) greater than the price of a futures contract. 

B) less than the price of a futures contract. 

C) equal to the price of a futures contract. 

Explanation

When interest rates and futures prices are uncorrelated the prices of forward and futures on the same asset will be equal. Liquidity is not an issue as no-arbitrage prices are based on riskless hedges that are held until settlement of the derivative security.

(Study Session 18, Module 57.2, LOS 57.f)

Question #59 of 62

The payoff of a call option on a stock at expiration is equal to:

A) the maximum of zero and the stock price minus the exercise price. 

B) the minimum of zero and the stock price minus the exercise price.



C) the maximum of zero and the exercise price minus the stock price.



Explanation

The payoff on a call option on a stock is $\text{Max}(0, S - X)$.

(Study Session 18, Module 57.3, LOS 57.j)

Question #60 of 62

A net benefit from holding the underlying asset of a forward contract will:

A) decrease the no-arbitrage forward price at initiation.



B) increase the value of the forward contract during its life.



C) decrease the value of the forward contract at expiration.



Explanation

Compared to an underlying asset with no net holding cost or benefit, a net benefit from holding the underlying asset will decrease the no-arbitrage forward price at initiation and the value of a forward contract during its life. Holding costs and benefits have no effect on the value of a forward contract at expiration.

(Study Session 18, Module 57.1, LOS 57.d)

Question #61 of 62

A synthetic European call option includes a short position in:

A) the underlying asset.



B) a risk-free bond.



C) a European put option.



Explanation

A synthetic European call option consists of a long position in the underlying asset, a long position in a European put option, and a short position in a risk-free bond (i.e., borrowing at the risk-free rate).

(Study Session 18, Module 57.3, LOS 57.l)

Question #62 of 62

A decrease in the riskless rate of interest, other things equal, will:

A) increase call option values and decrease put option values.



B) decrease call option values and increase put option values.



C) decrease call option values and decrease put option values.



Explanation

A decrease in the risk-free rate of interest will decrease call option values and increase put option values.

(Study Session 18, Module 57.3, LOS 57.k)

www.ombookcentre.in