Reading 57: Basics of Derivative Pricing and Valuation

Question #1 of 62

Question ID: 415902

Compared to European put options on an asset with no cash flows, an American put option:

A) will have the same minimum value.

B) will have a lower minimum value.

C) will have a higher minimum value.

Question #2 of 62

Question ID: 492029

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

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

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

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

Question #3 of 62

Question ID: 492032

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

A) Its price.

B) Neither its value nor its price.

C) Its value.

Question #4 of 62

Question ID: 415858

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.

Question #5 of 62

Question ID: 500876

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) less than the price of a futures contract.

B) equal to the price of a futures contract.

C) greater than the price of a futures contract.

Question #6 of 62

Question ID: 415869

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?

	Intrinsic Value	Moneyness
A)	$0	Out-of-the-money
B)	$7	At-the-money
C)	$7	Out-of-the-money

Question #7 of 62

Question ID: 415916

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

A) are negatively correlated with the stock price and the profits from a long put are positively correlated with the stock price.

B) and a long put are positively correlated with the stock price.

C) are positively correlated with the stock price and the profits from a long put are negatively correlated with the stock price.

Question #8 of 62

Question ID: 415891

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

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

Question #9 of 62

Question ID: 415867

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.

Question #10 of 62

Question ID: 415929

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?

	Value of a call option	Value of a put option
A)	Increase	Decrease
B)	Increase	Increase
C)	Decrease	Increase

Question #11 of 62

Question ID: 472451

A synthetic European put option includes a short position in:

A) a European call option.

B) a risk-free bond.

C) the underlying asset.

Question #12 of 62

Question ID: 472447

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.

Question #13 of 62

Question ID: 472448

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

A) underlying asset price minus the exercise price.

B) underlying asset price minus the exercise value.

C) exercise price minus the exercise value.

Question #14 of 62

Question ID: 472438

The value of a forward or futures contract is:

A) equal to the spot price at expiration.

B) specified in the contract.

C) typically zero at initiation.

Question #15 of 62

Question ID: 415859

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) in-the-money by $10.00.

B) in-the-money by $7.50.

C) out-of-the-money by $2.50.

Question #16 of 62

Question ID: 415927

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 decrease put option values.

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

Question #17 of 62

Question ID: 498774

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.

Question #18 of 62

Question ID: 492028

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) difference between the spot price and the forward price.

B) present value of the difference between the spot price and the forward price.

C) spot price minus the present value of the forward price.

Question #19 of 62

Question ID: 415912

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

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

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

Question #20 of 62

Question ID: 500880

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

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

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

Question #21 of 62

Question ID: 472437

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

A) arbitrage opportunities do not arise in real markets.

B) arbitrage opportunities are exploited rapidly.

C) investors are risk neutral.

Question #22 of 62

Question ID: 500875

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

B) futures prices are negatively correlated with interest rates.

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

Question #23 of 62

Question ID: 496435

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

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

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

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

Question #24 of 62

Question ID: 492027

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.

Question #25 of 62

Question ID: 500874

Derivatives valuation is based on risk-neutral pricing because:

A) risk tolerances of long and short investors are assumed to offset.

B) the risk of a derivative is based entirely on the risk of its underlying asset.

C) this method provides an intrinsic value to which investors apply a risk premium.

Question #26 of 62

Question ID: 472453

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 spot price of the underlying asset.

C) The future value of the forward price of the underlying asset.

Question #27 of 62

Question ID: 415920

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 short a pure discount bond that pays the exercise price at option expiration.

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

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

Question #28 of 62

Question ID: 415919

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.

Question #29 of 62

Question ID: 456309

A put option is in the money when:

A) the stock price is lower than the exercise price of the option.

B) there is no put option with a lower exercise price in the expiration series.

C) the stock price is higher than the exercise price of the option.

Question #30 of 62

Question ID: 472450

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

A) increase the value of the option.

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

C) decrease the value of the option.

Question #31 of 62

Question ID: 415863

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 June $55.00 call is an in-the-money option.

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

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

Question #32 of 62

Question ID: 492034

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 buying the put option.

B) writing the call option and writing the put option.

C) buying the call option and writing the put option.

Question #33 of 62

Question ID: 492031

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

A) less than forward prices.

B) greater than forward prices.

C) unaffected relative to forward prices.

Question #34 of 62

Question ID: 415773

A forward rate agreement (FRA):

A) is settled by making a loan at the contract rate.

B) is risk-free when based on the Treasury bill rate.

C) can be used to hedge the interest rate exposure of a floating-rate loan.

Question #35 of 62

Question ID: 500881

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

A) considers the additional risk inherent in options.

B) can account for contingent payoffs of options.

C) does not require an assumption about volatility.

Question #36 of 62

Question ID: 415862

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

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

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

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

Question #37 of 62

Question ID: 472444

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 futures contract requires daily settlement.

B) the futures contract is more difficult to exit.

C) the forward contract is more liquid.

Question #38 of 62

Question ID: 415926

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

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

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

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

Question #39 of 62

Question ID: 472439

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

A) can differ in size from the value of the short position.

B) is equal to the value of the short position.

C) is opposite to the value of the short position.

Question #40 of 62

Question ID: 472440

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

A) depends on the price of the underlying asset.

B) increases to the forward contract price.

C) approaches zero.

Question #41 of 62

Question ID: 415888

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

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

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

C) a call option expires worthless.

Question #42 of 62

Question ID: 500878

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.

Question #43 of 62

Question ID: 472452

A synthetic European call option includes a short position in:

A) the underlying asset.

B) a European put option.

C) a risk-free bond.

Question #44 of 62

Question ID: 500877

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

A) negative when floating rates are highly volatile.

B) determined by expected future short-term rates.

C) zero when floating rates and fixed rates are equal.

Question #45 of 62

Question ID: 472445

One of the principal characteristics of swaps is that swaps:

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

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

C) are standardized derivative instruments.

Question #46 of 62

Question ID: 472443

The underlying instrument in a forward rate agreement is:

A) an interest rate.

B) a fixed-income security.

C) an asset.

Question #47 of 62

Question ID: 492030

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

A) Dividends.

B) Convenience yield.

C) Storage and insurance.

Question #48 of 62

Question ID: 415895

The intrinsic value of an option is equal to:

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

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

C) its speculative value.

Question #49 of 62

Question ID: 415866

A call option that is in the money:

A) has an exercise price greater than the market price of the asset.

B) has an exercise price less than the market price of the asset.

C) has a value greater than its purchase price.

Question #50 of 62

Question ID: 737799

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) greater than the present value of the spot price.

C) less than the future value of the spot price.

Question #51 of 62

Question ID: 415921

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

A) a call that is synthetically created from other instruments.

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

C) a call option and a share of stock.

Question #52 of 62

Question ID: 500879

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

A) equal to its intrinsic value.

B) equal to the asset price minus the present value of the exercise price.

C) less than that of an otherwise identical American call option.

Question #53 of 62

Question ID: 756729

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.

Question #54 of 62

Question ID: 492033

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) negative.

B) zero.

C) positive.

Question #55 of 62

Question ID: 415868

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 $20.00 has intrinsic value.

B) A put with a strike price of $35.00 is in-the-money.

C) A call with a strike price of $25.00 is at-the-money.

Question #56 of 62

Question ID: 492026

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

A) Risky asset + risk-free asset = (- derivative position).

B) Risky asset + derivative = risk-free asset.

C) Derivative position - risk-free asset = risky asset.

Question #57 of 62

Question ID: 496436

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 higher value.

B) the same value.

C) a lower value.

Question #58 of 62

Question ID: 472446

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

A) values at swap initiation that sum to zero.

B) values at swap initiation that are equal to zero.

C) values at swap expiration that sum to zero.

Question #59 of 62

Question ID: 472442

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

A) storage costs.

B) convenience yield.

C) dividend payments.

Question #60 of 62

Question ID: 472455

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.

Question #61 of 62

Question ID: 415896

A call option's intrinsic value:

A) 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.

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) 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.

Question #62 of 62

Question ID: 415887

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.