Question #1 of 19

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 in-the-money. ❌

 C) above the strike price, a put option is out-of-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*.

(Module 55.1, LOS 55.a)

Question #2 of 19

An investor will exercise a European put option on a stock at its expiration date if the stock price is:

 A) greater than the exercise price. ❌

 B) equal to the exercise price. ❌

 C) less than the exercise price. ✅

Explanation

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

(Module 55.1, LOS 55.a)

Question #3 of 19

For a European style put option:

A) time value is equal to its market price minus its exercise value. ✅

B) intrinsic value is equal to its market price plus its exercise value. ❌

C) exercise value is equal to the underlying stock price minus its exercise price. ❌

Explanation

The time value of an option (either a put or a call) is equal to its market price minus its exercise value. A put's exercise value is the maximum of zero or its exercise price minus the stock price. *Intrinsic value* is another term for exercise value.

(Module 55.1, LOS 55.a)

Question #4 of 19

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

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

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

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

Explanation

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

(Module 55.1, LOS 55.c)

Question #5 of 19

An investor holds two options on the same underlying stock, a call option with an exercise price of 25 and a put option with an exercise price of 30. If the market price of the stock is 27:

A) only one of the options is in the money. ❌

B) neither option is in the money. ❌

C) both options are in the money. ✅

Explanation

Both options are in the money. The put option is in the money because the option holder has the right to sell the stock for more than its market price. The call option is in the money because the option holder has the right to buy the stock for less than its market price.

(Module 55.1, LOS 55.a)

Question #6 of 19

Other things equal, a short put position would become more valuable as a result of an increase in:

A) the time to expiration. ❌

B) the price of the underlying asset. ✅

C) the volatility of the price of the underlying asset. ❌

Explanation

An increase in the price of the underlying asset would decrease the value of a put option, which would make a long position in the put less valuable and a short position more valuable. An increase in either the volatility of the underlying asset price or time to expiration would increase the put value and decrease the value of a short position.

(Module 55.1, LOS 55.c)

Question #7 of 19

An investor has bought a European put option and written a European call option. Other things equal, a decrease in the risk-free rate will increase the value of:

A) both of these option positions. ✅

B) only one of these option positions. ❌

C) neither of these option positions. ❌

Explanation

A decrease in the risk-free rate would decrease call option values and increase put option values. Because this investor is short calls and long puts, both positions would increase in value.

(Module 55.1, LOS 55.c)

The time value of a European call option with 30 days to expiration will *most likely* be:

A) less than the current option premium if the option is currently in-the-money. ✓

B) greater than the current option premium if the option is currently out-of-the-money. ✗

C) equal to the intrinsic value if the exercise price is greater than the current spot price. ✗

Explanation

The option premium is made up of time value and intrinsic value. Intrinsic value is positive if an option is in-the-money and zero otherwise. Time value is always positive for call options. If the option still has 30 days until expiration and is in-the-money, the option premium will be the positive intrinsic value, plus the positive time value. Hence, the time value will be less than the premium.

If the option is out-of-the-money, the intrinsic value will be zero, and the option premium will be equal to the time value. If the exercise price is greater than the current spot price, the call option is out-of-the-money and hence the intrinsic value again is zero. But as the call option still has time to expiration, the time value will be positive.

(Module 55.1, LOS 55.a)

Question #9 of 19

Question ID: 1463659

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 increase put option values. ✗

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

Explanation

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

(Module 55.1, LOS 55.c)

The value of a put option at expiration is *most likely* to be increased by:

A) a higher exercise price. ✓

B) a lower risk-free interest rate. ✗

C) higher volatility of the underlying asset price. ✗

Explanation

The value of an option at expiration is the greater of zero or its exercise value. A higher exercise price increases the exercise value of a put option because it gives the holder the right to sell the underlying asset for a higher price. The risk-free interest rate and volatility of the underlying asset price only affect the time value of options, which is zero at expiration.

(Module 55.1, LOS 55.c)

Question #11 of 19

Question ID: 1463655

The time value of an option is *most accurately* described as:

A) increasing as the option approaches its expiration date. ✗

B) the amount by which the intrinsic value exceeds the option premium. ✗

C) equal to the entire premium for an out-of-the-money option. ✓

Explanation

The price (or premium) of an option is its intrinsic value plus its time value. An out-of-the-money option has an intrinsic value of zero, so its entire premium consists of time value. Time value is zero at an option's expiration date. Time value is the amount by which an option's premium exceeds its intrinsic value.

(Module 55.1, LOS 55.a)

Question #12 of 19

Question ID: 1463650

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.

(Module 55.1, LOS 55.a)

Question #13 of 19

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.

(Module 55.1, LOS 55.a)

Question #14 of 19

At expiration, exercise value is equal to time value for:

A) an in-the-money call or an out-of-the-money put. ✗

B) an out-of-the-money call or an in-the-money put. ✗

C) an out-of-the-money call or an out-of-the-money put. ✓

Explanation

The time value of an option is zero at expiration. For an out-of-the-money option, the exercise value is zero at expiration.

(Module 55.1, LOS 55.a)

Question #15 of 19

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

A) An increase in the exercise price. ✗

B) A dividend on the underlying asset. ✗

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.

(Module 55.1, LOS 55.c)

Question #16 of 19

Compared to an otherwise identical European put option, one that has a longer time to expiration:

A) must be worth at least as much as the put that is nearer to expiration. ✗

B) must be worth more than the put that is nearer to expiration. ✗

C) may be worth less than the put that is nearer to expiration. ✓

Explanation

Normally, options with greater time to expiration are worth more than otherwise identical options that are nearer to expiration. However, in some circumstances, this relationship may not hold for European puts. For example, if the price of the underlying asset goes to zero, the European put with less time to expiration may be worth more because the put holder will receive the exercise price earlier.

(Module 55.1, LOS 55.c)

Question #17 of 19

A call option's intrinsic value:

decreases as the stock price increases above the strike price, while a put

A) 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. ✔

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.

(Module 55.1, LOS 55.c)

Question #18 of 19

Question ID: 1463662

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

A) decrease the value of the option. ✔

B) increase the value of the option. ✖

C) have no effect on the value of the option. ✖

Explanation

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

(Module 55.1, LOS 55.c)

Question #19 of 19

Question ID: 1463658

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

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

(Module 55.1, LOS 55.c)