

# **Level I of the CFA® 2025 Exam**

Questions - Derivatives

Offered by AnalystPrep

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## **Learning Module 1: Derivative Instrument and Derivative Market Features**

Q.78 Which of these is *least likely* a characteristic of over-the-counter options?

- A. They are highly regulated.
  - B. Large traders trade over large sums of money.
  - C. They are often used to hedge interest rate risks and currency fluctuation risks.
- 

Q.81 The implied volatility on S&P 500 options has decreased over the past month. An analyst would *most likely* conclude that:

- A. Interest rates have decreased.
  - B. The value of the broad market has decreased.
  - C. The level of market uncertainty has decreased.
- 

Q.1048 Exchange-traded derivatives are *most likely*:

- A. Standardized and backed by a clearinghouse.
  - B. Standardized but not backed by a clearinghouse.
  - C. Backed but not standardized by a clearinghouse.
- 

Q.1053 Which of the following is *least likely* accurate for exchange-traded derivatives?

- A. Exchange-traded derivatives are liquid.
  - B. Exchange-traded derivatives are standardized contracts.
  - C. Exchange-traded derivatives carry significant default risk.
-

Q.1132 Which of the following is *least likely* an exchange-traded derivative instrument?

- A. Option contract.
  - B. Futures contract.
  - C. Forward contract.
- 

Q.3353 Sonia Bass works as a hedge fund manager at High-Yield Investments (HYIN). While talking to a colleague, Bass posed the following question: "How do the standardization of derivative investments and the presence of designated market makers help the trade of such securities?" The best answer to Bass' question is that they:

- A. Guarantee the buying and selling of a derivative.
  - B. Increase liquidity and reduce the cost of liquidity.
  - C. Guarantee the price at which a derivative is traded.
- 

Q.3355 In contrast to OTC-traded derivatives, exchange-traded derivatives *least likely*:

- A. Have higher liquidity.
  - B. Operate at a higher degree of regulation.
  - C. Operate at a lower degree of regulation.
- 

Q.3364 Derivatives are financial instruments which:

- A. Derive their performance from that of an underlying asset.
  - B. Transform risk when transferring it from one party to another.
  - C. Are created in the form of an informal agreement between buyer and seller.
-

Q.3367 Relative to over-the-counter (OTC) derivatives, exchange-traded derivatives are:

- A. Traded in larger lot sizes.
  - B. Transacted through a process that is verified by a central exchange.
  - C. Traded in markets where there is zero potential to earn arbitrage profits.
- 

Q.3384 Which of the following principles *most likely* form the basis of pricing derivatives?

- A. A hedge portfolio that earns the risk-free rate is constructed.
  - B. The correct derivative price assures that the market has exploitable arbitrage opportunities.
  - C. The expected payoff of the derivative must be discounted at the sum of the risk-free rate and risk premium.
- 

Q.3394 In contrast with exchange-traded derivatives markets, over-the-counter derivatives markets provide:

- A. Liquidity.
  - B. Flexibility.
  - C. Transparency.
- 

Q.3896 Which of the following derivatives instruments *most likely* trade over the counter?

- A. Futures contracts and forwards contracts.
  - B. Futures contracts, forwards contracts and swaps.
  - C. Forwards contracts, swaps, and asset-backed securities.
-

Q.3897 Blackoil Traders Inc. is an American oil producing company that regularly sells oil futures to reduce the risk of fluctuating oil prices. This activity can *best* be described as:

- A. Clearing.
  - B. Hedging.
  - C. Speculating.
- 

Q.4125 Which of the following is *most likely* an example of a contingent claim?

- A. A puttable bond.
  - B. A \$500 bond purchase.
  - C. A contract to deliver gas at \$100 per barrel.
- 

Q.4126 Abson Limited is a Japanese company selling oil drilling machines globally. Consider the following draft commercial contract extracted from Clap company's records.

Contract Date	Today
Goods seller	Abson Limited, Japan
Goods buyer	Clap Company, USA
Goods description	Oil drilling machine
Quantity	Two
Delivery date	150 days from the contract date
Delivery terms	Delivered by ferry. Costs and taxes to be paid by the buyer
Payment terms	The amount is payable by the buyer upon delivery
Contract price	\$17,525

The financial manager is considering a forward commitment to hedge Abson's financial risk under the above commercial transaction. Which of the following is *most likely* an underlying asset in this case?

- A. Currency
  - B. Oil drilling machine
  - C. Contract price
-

## **Learning Module 2: Forward Commitment and Contingent Claim Features and Instruments**

Q.33 Chris Dunkins bought a put option with a strike of \$59. If at expiration the stock is now worth \$42, then what is *most likely* the payoff of the option at expiration?

- A. \$17 negative payoff.
  - B. \$0 payoff.
  - C. \$17 positive payoff.
- 

Q.1039 How should the correlation between the interest rate and a futures contract be to result in a positive difference between the price of this contract and an equivalent forward contract?

- A. 0.
  - B. Positive.
  - C. Negative.
- 

Q.1040 What is *most likely* the difference between a fixed-for-floating swap and an equivalent series of forward contracts?

- A. The payment dates would be unlikely to match.
  - B. All the fixed-rate payments in a swap are equal.
  - C. The floating-rate payments in a swap are unknown.
- 

Q.1049 Which of the following *best* describes a forward commitment?

- A. A forward commitment is a claim (to a payoff) that depends on a particular event.
  - B. A forward commitment is a legally binding promise to perform some action in the future.
  - C. A forward commitment is a contingent claim that depends on a stock price at some future date.
-

Q.1050 Which of the following *best* describes an option contract?

- A. An option contract is a legally binding promise to perform some action in the future.
  - B. An option contract is a contingent claim that depends on a stock price at some future date.
  - C. An option contract is a legal agreement to buy or sell a financial instrument at a predetermined price at a specified time.
- 

Q.1051 A futures contract can *most likely* be categorized as:

- A. Customized.
  - B. A contingent claim.
  - C. A forward commitment.
- 

Q.1054 A call option *most likely* gives:

- A. The right but not the obligation to sell an asset at a predetermined price.
  - B. The right but not the obligation to buy an asset at a predetermined price.
  - C. The obligation but not the right to buy an asset at a predetermined price.
- 

Q.1056 A European option *most likely*:

- A. Can be exercised only at the contract's expiration date.
  - B. Can be exercised before expiration but only on set dates.
  - C. Can be exercised at any time up to and including the contract's expiration date.
-

Q.1073 A put option *most likely* gives:

- A. The obligation to buy an underlying asset at a specified strike price prior to or on a specified date.
  - B. The right but not the obligation to buy an underlying asset at a specified strike price prior to or on a specified date.
  - C. The right but not the obligation to sell an underlying asset at a specified strike price prior to or on a specified date.
- 

Q.1133 Which of the following derivative contracts may *most likely* expose the owner of the contract to default risk?

- A. Swap contract.
  - B. Option contract.
  - C. Futures contract.
- 

Q.1134 The party in a forward transaction who agrees to deliver the physical or financial assets at a specific date *most likely* has a:

- A. Long forward position.
  - B. Short forward position.
  - C. Neutral forward position.
- 

Q.1135 Which of the following factors *most likely* differentiates futures contracts from forward contracts?

- A. Futures contracts trade on regulated markets.
  - B. The value of a futures contract is derived from its underlying asset.
  - C. Forwards contracts require physical assets for settlement, not cash.
-

Q.1140 In order to protect themselves from the downside risk of stock prices, investors should *most likely*:

- A. Buy put options.
  - B. Sell put options.
  - C. Buy call options.
- 

Q.1151 A derivative instrument that enables an investor to lock a certain interest rate for future borrowing or lending is *most likely* called:

- A. A credit interest swap.
  - B. An interest rate contract..
  - C. A forward rate agreement.
- 

Q.1152 Which of the following derivative instrument is more standardized and liquid?

- A. Futures.
  - B. Forwards.
  - C. Credit swaps.
- 

Q.1154 Rabi Koch took a long position in a March put option with a strike price of \$65. What is the outcome of the position if the spot price is \$78 at expiration?

- A. \$0 payoff.
  - B. \$13 positive payoff.
  - C. \$13 negative payoff.
-

Q.1158 What is the intrinsic value for the buyer of one hundred \$37 call options on shares of MZJ Corp if the underlying shares are trading at \$35?

- A. \$0.
  - B. \$2.
  - C. \$200.
- 

Q.1245 Which of the following instruments *most likely* gives the right but not the obligation to a commodities investor to purchase the underlying commodities?

- A. Futures.
  - B. Options.
  - C. Forwards.
- 

Q.3348 In contrast to interest rate options, forward rate agreements (FRAs) *most likely*:

- A. Impose obligations on the counterparties.
  - B. Are contracts with an interest rate as the underlying.
  - C. Are usually offered for purchase and sale by different dealers.
- 

Q.3352 Which of the following best describes a distinguishing feature of an equity swap relative to an interest rate or currency swap? In an equity swap, the payment is not known until the end of the settlement period whereas in a (an):

- A. Currency swap all payments are known at the beginning of the period.
  - B. Interest rate swap all payments are known at the beginning of the period.
  - C. Interest rate or currency swap all payments are known at the beginning of the period.
-

Q.3366 In contrast to contingent claims, forward commitments:

- A. Limit losses in one direction.
  - B. Obligate the counterparties to transact on pre-agreed terms.
  - C. Generate an outcome that is determined at the contract expiration date.
- 

Q.3373 Consider the following statement: "A currency swap exposes parties to two sources of risk – interest rate risk and currency risk – but provides protection against default risk." The statement is *least likely* correct with respect to:

- A. Default risk.
  - B. Currency risk.
  - C. Interest rate risk.
- 

Q.3388 A forward rate agreement (FRA) *most likely*:

- A. Eliminates a lender's exposure to default risk.
  - B. Creates the ability to speculate on interest rates.
  - C. Trades on exchanges such as the CME, CBOE, and Eurex.
- 

Q.3389 Which of the following derivatives will involve one party paying a variable series of cash flows determined by an asset or rate?

- A. Swap contract.
  - B. Option contract.
  - C. Futures contract.
-

Q.3893 Consider a call option with a premium of \$21 and a strike price of \$198. What is the maximum possible profit for the writer of the call?

- A. \$21.
  - B. \$177.
  - C. \$198.
- 

Q.3895 In a credit default swaps (CDS), the short position is betting on:

- A. The borrower defaulting.
  - B. The borrower not defaulting.
  - C. The long position not defaulting.
- 

Q.4128 Companies A and B have entered a swap contract with a notional principal of £256 million. Company A pays a semiannual fixed rate of 5% and receives the 6-month LIBO. If the 6-month LIBO rate is 4.32%, how much money will company B *most likely* pay or receive?

- A. Pay £0.87 million.
  - B. Receive £0.87 million.
  - C. Receive £256.81 million
- 

Q.4129 Which of the following is *least likely* a linear derivative?

- A. Swaps.
  - B. Options.
  - C. Forward contracts.
-

Q.4130 Which of the following *best* describes the payoff of a short position in a forward contract if the forward price falls below the underlying price at maturity?

- A. Zero payoff.
  - B. Positive payoff.
  - C. Negative payoff.
- 

Q.4131 Which of the following is *least likely* correct regarding a futures contract?

- A. No cash changes hands at the futures contract initiation.
  - B. Futures contracts are directly executed between the counterparties.
  - C. Like a forward contract, the payoff is based on the difference between the futures price and the underlying price at the expiration date.
- 

Q.4132 Which of the following *least likely* distinguishes a futures contract from a forward contract?

- A. Initial cash outlay.
  - B. Mark-to-market process.
  - C. Margining requirements.
- 

Q.4133 Which of the following is *most likely* associated with a margin call?

- A. Initial margin.
  - B. Maintenance margin.
  - C. Variation margin.
-

Q.4134 Devco Construction limited enters a 3-month Futures contract on an exchange through a financial intermediary to buy 1,000 barrels of gasoline at USD 78 per barrel. The exchange requires an initial margin of USD 2,340 per futures contract and a maintenance margin of USD 2,280 per contract. If, at first today's close, the futures price is USD 77.80 per barrel, the Devco's margin account balance for the day is *closest to*:

- A. USD 200
  - B. USD 2,140
  - C. USD 2,540
- 

Q.4136 Which of the following is *most likely* true regarding a short position in a put option?

- A. The profit is equal to the put option premium if the underlying price falls below the exercise price.
  - B. The profit is equal to the put option premium if the underlying price exceeds the exercise price.
  - C. Has counterparty credit risk to the long position once the option premium has been paid
-

## **Learning Module 3: Derivative Benefits, Risks, and Issuer and Investor Uses**

Q.1139 Which of the following is *most likely* a benefit of investing in derivatives markets?

- A. Derivatives markets are highly leveraged.
  - B. Derivatives markets provide risk-free return.
  - C. Derivatives markets distribute risk among market participants.
- 

Q.3358 "Derivatives have benefits relative to trading the underlying." Which of the following would *least likely* refute the above statement?

- A. Higher transaction costs
  - B. The use of a large amount of leverage
  - C. Increase in the amount of speculative trading
- 

Q.3370 Speculation through derivatives has a destabilizing consequence on markets as:

- A. Speculators employ high levels of leverage.
  - B. Speculators are thought to engage in price manipulation.
  - C. Derivatives are highly complex and easily misunderstood.
- 

Q.4137 Which of the following is *least likely* a way derivative markets lead to efficient financial markets?

- A. Offering an effective way to exploit mispricing.
  - B. Reflecting fundamental values earlier in the derivative market than in the cash market.
  - C. Providing a price discovery function outside cash or spot markets.
-

Q.4138 Which of the following is *least likely* an operational advantage of derivatives?

- A. Lower transaction costs.
  - B. High liquidity.
  - C. High upfront cash requirements.
- 

Q.4139 Which of the following is *least likely* a way in which counterparty credit risk can vary with different derivatives instruments and markets?

- A. Over-the-counter markets are associated with low counterparty risk due to the mark-to-market process and margining procedures.
  - B. Exchange-traded derivatives are associated with low counterparty risk due to the mark-to-market process and margining procedures.
  - C. Counterparty credit risk is prevalent in over-the-counter markets due to privately negotiated credit terms between counterparties.
- 

Q.4140 Which of the following is *most likely* an operational benefit of derivative instruments?

- A. Increased liquidity.
  - B. Informational discovery.
  - C. Greater potential for speculative use.
- 

Q.4141 Which of the following is *most likely* the use of derivatives by both the issuers and the investors?

- A. Replicating cash market strategy.
  - B. Changing exposure to an underlying asset price without transacting in the cash market.
  - C. Offsetting or hedging market-based underlying exposures related to commercial operations and financing activities.
-

Q.4142 Which of the following is *most likely* an example of a fair value hedge?

- A. Selling commodities forward in expectation of lower prices.
  - B. An interest rate swap of a floating rate for a fixed debt.
  - C. A currency forward to offset the foreign exchange risk of a foreign business operation.
-

## **Learning Module 4: Arbitrage, Replication, and the Cost of Carry in Pricing Derivatives**

Q.1141 Arbitrage profit is the risk-free profit that is earned when two securities with different prices have:

- A. Low market liquidity.
  - B. Identical cash flows.
  - C. Identical term structures.
- 

Q.1147 In the context of commodity forwards and futures contracts, the benefit of holding the commodity and possibly selling it in the midst of a shortage is known as the:

- A. Cost of carry.
  - B. Risk premium.
  - C. Convenience yield.
- 

Q.1150 If the cost and benefit of holding a forward contract until expiration is zero, then which one of these is *most likely* the payoff of a long forward contract at expiration?

- A. Spot price at expiration minus forward price.
  - B. Forward price minus spot price at expiration.
  - C. Spot price at initiation minus the forward price.
-

Q.3294 A hedge fund analyst is assessing a futures contract with the following characteristics:

Spot price	\$80.96
Interest costs	\$11.90
PV of Convenience yield	\$5.50
PV of Storage costs	\$7.80

The 'cost of carry' for the futures contract is *closest to*:

- A. -\$2.3.
  - B. \$13.3.
  - C. \$14.2.
- 

Q.3369 Which of the following conditions will *least likely* make it difficult for the process of arbitrage to correct a mispricing?

- A. The asset class is illiquid.
  - B. Transaction costs are high.
  - C. Information on asset prices is easily available.
- 

Q.3379 When the convenience yield exceeds storage costs, the forward transaction will return:

- A. Less than the spot transaction.
  - B. More than the spot transaction.
  - C. The present value of the forward price.
- 

Q.3398 Assuming all else is held constant, when a commodity stock is in short supply, investors can expect a:

- A. Positive cost of carry.
  - B. High convenience yield.
  - C. Positive expected return.
-

Q.4143 The spot price of a barrel of oil is \$1,000. A trader enters into a one-year forward contract to purchase oil at a forward price of \$1,200 per barrel. Assuming a no-arbitrage opportunity and a risk-free rate of 10%, the cost of carry associated with the forward contract is *closest to*:

- A. \$90.91
  - B. \$100
  - C. \$320
- 

Q.4144 Two identical assets, assets A and B, have the same spot price. However, asset A has more associated costs than asset B. Assuming that there are no associated benefits in both assets which of the following statements is *most likely* correct regarding the forward prices of forward contracts on assets A and B?

- A. Asset A has a lower forward price than asset B.
  - B. Asset A has a higher forward price than asset B.
  - C. Assets A has a higher spot price than asset B at maturity.
- 

Q.4146 Miles discovers an arbitrage opportunity in a market. She notices that the spot share price of a company share is \$70, and a 3-month forward contract on the same shares sells at a forward price of \$74. In order to take advantage of the apparent arbitrage opportunity, Miles borrows money at a risk-free rate of 5% and buys the shares at a price of \$70 per share. At the same time, she takes a short position in the forward contract. Assuming that the asset has no associated costs or benefits, the arbitrage profit per share that Miles earns from the trade at the contract maturity is *closest to*:

- A. \$0.50
  - B. \$3.14
  - C. \$4.00
-

Q.4147 Given a stock index that pays a dividend yield of 2% and is trading at a spot price of \$65, and assuming a risk-free rate of 5%, the stock's six-month forward price is *closest to*:

- A. \$65.98
  - B. \$66.64
  - C. \$68.25
- 

Q.4148 A trader borrows \$1,000 at a risk-free rate of 5% to purchase an asset whose spot price is \$1,000. He then sells the asset after two years at a spot price of \$1,200 and uses some of the proceeds from the sale to repay his loan plus interest. The trader has *most likely* used which of the following replication strategies?

- A. Long-forward replication.
  - B. Short-forward replication.
  - C. Risk-free trade replication.
- 

Q.4149 The present value of the benefits of holding a barrel of oil is \$1,000. If the barrel of oil is trading at a spot price of \$5,000 and assuming that the present value of the storage cost is \$2,000 and the risk-free rate is 5%, the one-year forward price of a forward contract on a barrel of oil is *closest to*:

- A. \$4,200
  - B. \$6,000
  - C. \$6,300
-

## **Learning Module 5: Pricing and Valuation of Forward Contracts and For An Underlying with Varying Maturities**

Q.1052 The party to a forward contract who agrees to buy the financial or physical asset has a:

- A. Long call position.
  - B. Long forward position.
  - C. Short forward position.
- 

Q.3346 A U.S. based company has a subsidiary in Germany from which it expects to receive €8 million in the next 3 months. If the company's management is concerned about foreign currency, it will *most likely* enter into a:

- A. Currency forward contract by taking a short position in the \$.
  - B. Currency forward contract by taking a short position in the €.
  - C. Forward rate agreement (FRA) by taking a long position in the €.
- 

Q.3393 Which of the following statements is *most likely* correct regarding the value of a forward contract to a short party at expiration?

The value of the forward contract is:

- A. Zero.
  - B. Equal to the value to the long party multiplied by -1.
  - C. Positive if the spot price of the underlying exceeds the forward price.
- 

Q.4150 From a forward contract seller's perspective, what will *most likely* happen to the contract's MTM value if the risk-free rate increases?

- A. The MTM value will increase.
  - B. The MTM value will decrease
  - C. The MTM value will remain the same.
-

Q.4151 Assuming that trading and transaction costs are negligible, which of the following derivatives *least likely* has an initial valuation value of zero?

- A. Options.
  - B. Swap contracts
  - C. Forward contracts.
- 

Q.4153 Lisa Junior owns 10,000 shares of Unifier Limited. She enters into a six-month forward contract to sell 3,500 shares at a forward price of \$70 per share. The contract value at maturity from the buyer's perspective, assuming the spot price at maturity is \$100 per share, is *closest* to:

- A. -\$105,000.
  - B. \$105,000.
  - C. \$300,000.
- 

Q.4154 A trader enters into a one-year forward contract to purchase ABC Company's shares at a forward price of INR 528.01 per share. The current spot price of the shares is INR 502.87 per share. Assuming that the spot price increases instantaneously to INR 504.66 per share at contract inception and assuming a risk-free rate of 5%, the forward contract MTM from the trader's perspective is *most likely*:

- A. -INR 1.79
  - B. INR 0
  - C. INR 1.79
-

Q.4155 XYZ shylock gives out fixed-interest loans to borrowers. It obtains the money to lend by borrowing at the one-month variable MRR. To protect itself against interest rate risk, it enters into a one-month forward FRA contract on the one-month MRR. Which of the following *best* describes XYZ's interest rate exposure and the position it should take in the FRA contract?

- A. Exposed to a rise in the one-month MRR and should therefore be the fixed-rate payer
  - B. Exposed to a rise in the one-month MRR and should therefore be the fixed-rate receiver.
  - C. Exposed to a decline in the one-month MRR and should therefore be the floating rate receiver.
- 

Q.4156 Elliot Ltd. enters into a six-month forward contract with a financial intermediary to sell 800 shares in its possession at a forward price of \$80.25 per share. The spot price at the initiation is \$75.12 per share, and the risk-free rate of return is 4%. The forward contract MTM value from Elliot Ltd.'s perspective after four months, if the share price falls to \$70.10, is *closest to*:

- A. \$9.11
  - B. \$9.63
  - C. \$10.68
- 

Q.4157 Consider a two-year forward contract purchased on the Japanese Yen. The short position has to deliver one Japanese Yen in exchange for a Canadian dollar. Assume the interest rates in Japan and Canada are 4% and 7%. Suppose the exchange rate of the Japanese Yen against the Canadian dollar is 1.80; the forward price is *closest to*:

- A. 1.4572
  - B. 1.5572
  - C. 1.6952
-

Q.4158 Paul Nasir plans to enter a forward contract to purchase gold, whose spot price is \$120, both at initiation and maturity. The net present value cost of carry for the gold is \$15. Suppose the risk-free rate is 4%; the value of a two-year-long forward contract on the asset at expiration is *closest to*:

- A. \$4.00
  - B. \$16.40
  - C. \$6.43
- 

Q.4159 Paul Nasir plans to enter a forward contract to purchase gold, whose spot price is \$120. The net cost of carry for the gold is \$15. Suppose the risk-free rate is 4%; the value of a two-year-long forward contract on the asset at expiration is *closest to*:

- A. \$4
  - B. \$6.4
  - C. \$8.5
- 

Q.4160 Steph Ellie enters into a forward contract on a non-dividend paying stock that matures in 3 months. Suppose the current stock price is \$84 and the risk-free rate of 2.5% per year. The forward price is *closest to*:

- A. \$81.25
  - B. \$83.14
  - C. \$84.52
- 

Q.4161 A portfolio manager purchases a two-year zero coupon bond with a par value of \$84.96. The two-year zero rate is *closest to*

- A. 1.34%
  - B. 2.62%
  - C. 8.49%
-

## **Learning Module 6: Pricing and Valuation of Futures Contracts**

Q.1059 In the case of a futures contract, the initial margin is *most likely*:

- A. The profits or losses settled daily.
  - B. The minimum amount that must be maintained at any time.
  - C. The amount that must be deposited before a trade may be made.
- 

Q.1143 If Michael Emery takes a long position in copper futures, which of the following parties will *most likely* take the opposite position in the contract?

- A. The clearinghouse.
  - B. Another investor/trader.
  - C. A large commercial bank.
- 

Q.1144 The everyday process of adjusting the margin to take into account the gains and losses on the value of futures contracts is known as:

- A. Clearing.
  - B. Value adjusting.
  - C. Marking to market.
- 

Q.3361 Which of the following floor traders in a futures exchange is *more likely* to benefit from the bid-ask spread?

- A. Scalpers.
  - B. Day traders.
  - C. Position traders.
-

Q.3380 Long positions in futures contracts are more desirable than forward contracts when the correlation between futures prices and interest rates is:

- A. Zero.
  - B. Positive.
  - C. Negative.
- 

Q.4162 A stock that pays an annual dividend of \$5 is trading at a spot price of \$72. If the stock's futures price is \$75.6, assuming a risk-free rate of 5%, which of the following statements is *most likely* correct? The stock is trading

- A. at its no-arbitrage futures price.
  - B. below its no-arbitrage futures price.
  - C. above its no arbitrage futures price.
- 

Q.4163 How do futures and forward prices *best* compare in situations where futures prices are positively correlated with interest rates over the contract's maturity period?

- A. They are the same.
  - B. Futures prices exceed forward prices.
  - C. Forward prices exceed futures prices
- 

Q.4164 Which of the following statements is *least likely* correct?

- A. Both futures and forward contracts have an initial value of zero.
  - B. The futures price is obtained by compounding the spot price at the risk-free rate.
  - C. The gains and losses of both futures and forward contracts are settled daily via a margin account.
-

Q.4165 The 90-day futures price of a barrel of oil is EUR 500. At the end of the second trading day, the spot price of the barrel of oil is EUR 525. Assuming that trading opens at the former day's closing spot and future prices and taking a risk-free rate of 4%, the contract's MTM value on day three is closest to:

- A. EUR 0.
  - B. EUR 29.71.
  - C. EUR 495.24.
- 

Q.4166 The implied six-month forward rate for an interest rate futures contract initiated at time  $t=0$  with a maturity period of one year, trading at \$89.10, is closest to:

- A. 0%
  - B. 8.9%
  - C. 10.9%
- 

Q.4167 Which of the following statements is *most likely* correct regarding a futures and forwards contract?

- A. MTM gains and losses are settled daily.
  - B. The contract price is constant throughout the contract period.
  - C. The presence of benefits will reduce the difference between the spot and the forward commitment contract price.
- 

Q.4168 In cases of rising interest rates, which of the following positions should a trader who wishes to hedge his liability of paying MRR in the future *most likely* take?

- A. Long FRA.
  - B. Short FRA.
  - C. Long futures contract.
-

## **Learning Module 7: Pricing and Valuation of Interest Rate and Other Swaps**

Q.1145 ZE Bank enters into a plain vanilla swap contract with Lux Financiers with the intent of receiving floating-rate payments. In these circumstances, ZE Bank *most likely* takes the:

- A. Short position.
  - B. Pay-fixed side.
  - C. Pay-floating side.
- 

Q.3349 Tiara Enterprises (TIEN) has just announced its plans to establish a facility in New York, USA, to meet the increased demand for its products. TIEN plans to fund the expansion with debt and in order to hedge the risk of borrowing, TIEN has entered into a plain vanilla interest rate swap with a notional principal of \$50 million. TIEN would make semiannual payments at the rate of 12% with the counterparty making floating rate payments at the Euribor rate. Assuming a 360-day year, if the Euribor was 13.5% on the last settlement date and is 11.0% on the current settlement date, the amount that TIEN would receive on the current settlement date is *closest to*:

- A. \$250,000.
  - B. \$375,000.
  - C. \$3,375,000.
- 

Q.3372 Which of the following statements is *most likely* correct regarding credit default swaps (CDS)?

- A. They represent exchange-traded derivatives.
  - B. The CDS seller is betting on the borrower not defaulting.
  - C. The credit protection buyer has an underlying loan obligation which requires protection.
-

Q.4169 Peter Gregg enters into a floating-for-fixed 5-year swap contract to hedge against a decline in interest rates. He agrees to pay the six-month MRR and receive the 4% fixed interest rate over a notional principal of \$5 million. Assuming that the sixth-month MRR is 2.3%, the swap's periodic settlement value from Peter's perspective in six months is *most likely*:

- A. A. \$42,500
  - B. B. \$85,000
  - C. C. \$100,000
- 

Q.4171 To hedge against increasing interest rates, Laura Smith, an investor, should *most likely* enter into which of the following swaps?

- A. Pay a fixed rate, and receive a fixed rate.
  - B. Pay a fixed rate and receive a floating rate.
  - C. Pay a floating rate and receive a fixed rate.
- 

Q.4172 Which of the following *best* illustrates a scenario that leads to a fixed-rate receiver having a positive MTM value on the settlement day of a floating-for-fixed swap contract? The present value of the:

- A. fixed payments to be received equals that of the floating payments to be paid.
  - B. fixed payments to be received is less than that of the floating payments to be paid.
  - C. fixed payments to be received is greater than that of the floating payments to be paid.
-

Q.4173 Consider the following exhibit:

Maturity	Annual coupon rate (%)	PV	YTM (%)	Zero rates (%)
1	1.25	98.5	2.46	2.46
2	1.75	98.0	2.86	2.90
3	2.25	97.5	3.12	3.20

The implied forward rate in two years is *most likely*:

- A. 2.46%
  - B. 3.34%
  - C. 3.80%
- 

Q.4174 A trader enters into a 5-year swap contract to pay the fixed rate and receive the 6-month floating rate. If the floating rate decreases below the fixed rate six months after contract inception, the trader will *most likely*?

- A. Realize a loss and make a net payment.
  - B. Realize a loss and receive a net payment.
  - C. Realize a gain and receive a net payment.
- 

Q.4845 What happens if the market reference rate (MRR) is set at a rate higher than the agreed-on fixed rate for a fixed-rate payer on a swap or forward rate agreement (FRA)?

- A. Realize a loss; pay; to
  - B. Realize a gain; receive; from
  - C. Realize a gain; pay; to
- 

Q.4846 Which characteristic corresponds to the implied forward rate, or the breakeven reinvestment rate, for a period starting in the future?

- A. Interest rate swap
- B. Forward rate agreement
- C. Both an interest rate swap and an interest rate forward contract

---

Q.4847 What features do interest rate swaps and forward rate agreements have in common regarding risk?

- A. No counterparty credit risk
  - B. Interest rate risk
  - C. Counterparty credit risk
- 

Q.4848 What is the characteristic unique to an interest rate swap?

- A. Involves a series of future cash flows
  - B. No cash flow exchanged upfront
  - C. Constant fixed rate for multiple periods
- 

Q.4849 Why do issuers and investors tend to prefer interest rate swaps over individual forward rate agreements?

- A. Higher liquidity
  - B. Lower cost
  - C. Greater flexibility
-

## **Learning Module 8: Pricing and Valuation of Options**

Q.1041 Consider a call option on a stock currently selling at \$95/share, and with a strike price of \$ 90/share. By how much is this option in the money or out of the money?

- A. \$5 at the money.
  - B. \$5 in the money.
  - C. \$5 out of the money.
- 

Q.1042 Consider a November 110 put on a stock currently selling at \$115/share. The option is:

- A. \$5 in the money.
  - B. \$5 at the money.
  - C. \$5 out of the money.
- 

Q.1043 Which of the following relationships is *most likely* correct?

- A. Option Premium = Intrinsic Value - Time Value.
  - B. Option Premium = Time Value - Intrinsic Value.
  - C. Option Premium = Intrinsic Value + Time Value.
- 

Q.1044 Which of the following is *least likely* a factor that determines the value of an option?

- A. The inflation rate.
  - B. The price of the underlying asset.
  - C. The volatility of the underlying asset.
-

Q.1046 A deep out-of-the-money option is *most likely* priced:

- A. At its time value.
  - B. Under its time value.
  - C. Higher than its time value.
- 

Q.1047 What is the *most likely* result of a decrease in the risk-free rate of return on put and call option prices?

- A. Both put and call prices will increase.
  - B. Put option prices will decrease while call option prices will increase.
  - C. Put option prices will increase while call option prices will decrease.
- 

Q.1146 Which of the following *best* describes the obligation of the writer of a put option?

- A. To sell the option at its strike price if the option is exercised.
  - B. To buy the underlying security at the option's strike price if the option is exercised.
  - C. To sell the underlying security at the option's strike price if the option is exercised.
- 

Q.1153 If the spot price is less than the strike price of a call option on the underlying, the option is said to be:

- A. In-the-money.
  - B. At-the-money .
  - C. Out-of-the-money.
- 

Q.1156 Which condition will *most likely* increase the value of a call option?

- A. A decrease in volatility.
- B. A decrease in stock price.
- C. An increase in the risk-free rate.

---

Q.1160 Which of the following options on assets that have cash flows during the term of the option will *most likely* have the greater price?

- A. Fiduciary option.
  - B. American option.
  - C. European option.
- 

Q.3347 Hailey Moore, a derivatives expert, made the following comments during a meeting with her fellow colleagues: Comment 1: "Call options are very lucrative investments since they offer the buyer unlimited gains and a limited loss potential." Comment 2: "Selling a call option, without taking offsetting positions, is probably the worst investment strategy since it exposes the investor to unlimited losses." Which of the following would *most likely* refute the aforementioned conclusions presented by Moore?

- A. Frequently closing out positions.
  - B. Changing frequencies with which gains and losses occur.
  - C. Most options being deep-in-the-money or deep out-of-money.
- 

Q.3360 The value of European call option is:

- A. Inversely related to the exercise price and the value of the underlying.
  - B. Directly related to the time to the expiration and the value of the underlying.
  - C. Directly related to the exercise price and inversely related to the value of the underlying.
-

Q.3363 James Porter is analyzing the following option contracts on a security with a current market price of \$20

Call Options	Exercise Price	Time to Expiration
A	\$25	36 months
B	\$29	8 months
C	\$30	22 months

Which of the above option contracts is *most likely* to have the lowest premium?

- A. Call A.
  - B. Call B.
  - C. Call C.
- 

Q.3365 An American style put option on a bond expires in 80 days and has an exercise price of \$0.90 per \$1 of par. The bond is currently worth \$1.20 per \$1 par and makes no cash payments during the life of the option. The risk-free rate of interest is 3.5%, and the notional principal of the contract is \$1,000. The bond is expected to be worth \$1.40 per \$1 par at option expiration. The highest and lowest possible prices (per \$1 par value) for the put option are respectively *closest to*:

- A. Highest price: \$0.89; Lowest price: \$0.20.
  - B. Highest price: \$0.90; Lowest price: \$0.00.
  - C. Highest price: \$1.40; Lowest price: \$1.20.
- 

Q.3378 Which of the following conditions will make a long-term European put option worth more than an otherwise identical short-term put option?

- A. The volatility in the market is low.
  - B. Interest rates are lower than they have ever been in the past.
  - C. Interest rates are higher than they have ever been in the past.
-

Q.3381 An investor purchases a European put option that is deep in the money. Increasing the risk-free rate and time to expiration will have an effect on the value of the option, that is:

- A. Neutral.
  - B. Positive.
  - C. Negative.
- 

Q.3382 Consider two otherwise identical 3-month European call and put options on BBT Company's stock. Who will benefit *most* from an increase in carrying costs?

- A. The call option issuer.
  - B. The put option holder.
  - C. The call option holder.
- 

Q.3390 The value of a European put option will increase with higher:

- A. Volatility.
  - B. Carrying costs.
  - C. Risk-free interest rates.
- 

Q.4182 Which of the following is *most likely* true regarding a call option replication strategy only?

- A. At option contract inception, borrow at a risk-free rate and then utilize the proceeds to buy the underlying asset at a price at the option inception.
  - B. At option contract inception, lend an amount equal to the option's exercise value at a risk-free rate and sell the underlying at a price at the option inception.
  - C. The replication strategy requires adjustment over time depending on the likelihood of option exercise.
-

Q.4183 Consider a one-year call option with an exercise price of \$100 and a risk-free rate of 1.5%. If after six months, the spot price of the underlying is \$105, the exercise value of the option after six months is *closest to*:

- A. \$0
  - B. \$0.74
  - C. \$5.74
- 

Q.4184 A one-year put option has an exercise value of \$99. After six months, the underlying spot price is \$96, and the observable price of the put option is \$4.5. Assuming the risk-free rate is 1%, the time value of the put option six months to maturity is *closest to*:

- A. \$1.99
  - B. \$2.51
  - C. \$7.01
- 

Q.4185 A European call option on a non-dividend paying stock has 4 months to maturity. The exercise price of the option is \$100, and the risk-free rate is 1.5%. If the current underlying price is \$105 and the current call option price is \$6.5, the time value of the call option is *closest to*:

- A. \$1.00
  - B. \$5.50
  - C. \$12.00
- 

Q.4186 Which of the following is *most likely* a consequence of a lower no-arbitrage bound at any time before maturity?

- A. A call option is exercisable if the underlying price exceeds the exercise price.
  - B. A call option is exercisable if the underlying price is less than the exercise price.
  - C. A call option buyer will not pay more than the underlying price for the right to buy the underlying.
-

Q.4187 Consider a one-year put option with an exercise price of USD 100 and a risk-free rate of 1%. If, after six months, the spot price of the underlying is USD 98.50, the no-arbitrage upper and lower bounds are *closest to*:

- A. Lower bound = 0.51; Upper bound = \$100.
  - B. Lower bound = 1.00; Upper bound = \$100.
  - C. Lower bound = 0.51; Upper bound = \$98.50.
- 

Q.4188 Which of the following factors *most likely* have the same effect on both the call and put options?

- A. Increase in the risk-free rate.
  - B. Decrease in exercise price.
  - C. Increase in the volatility of the underlying price
-

## **Learning Module 9: Option Replication Using Put-Call Parity**

Q.1149 In which of the following positions can an arbitrageur earn risk-free profits when the market is in contango?

- A. Long forward contract and long underlying asset at the spot price.
  - B. Short forward contract and long underlying asset at the spot price.
  - C. Short forward contract and short underlying asset at the spot price.
- 

Q.1155 Calculate the payoff of a fiduciary call option if the spot price is \$45, the strike price is \$37, and the payoff on the riskless bond is \$37.

- A. \$8.
  - B. \$10.
  - C. \$45.
- 

Q.3351 Leslie Hower is a junior trader at a derivatives dealer firm. During her first week at the firm, Hower attempts to synthetically sell a risk-free bond using call and put options. She purchases call and put options with the same exercise price and time to maturity. She simultaneously buys the underlying. With respect to her attempts in creating a synthetic short position in a risk-free bond, Hower is *most accurate* regarding her decision to:

- A. Purchase put options.
  - B. Purchase call options.
  - C. Buy the underlying short.
- 

Q.3362 A synthetic long position in a riskless bond is *most likely* created by combining:

- A. A long position in a put, a long position in the underlying, and a short position in the call.
- B. A long position in a call, a long position in the underlying, and a short position in the put.
- C. A short position in a put, a short position in the underlying, and a long position in the call.

---

Q.3376 Which of the following combinations is *most likely* equivalent to going long a bond?

- A. Investing in a put option, purchasing the underlying, and at the same time selling a call.
  - B. Investing in a call option, selling the underlying, and at the same time purchasing a put.
  - C. Investing in a put option and a call option on the same underlying while going short the underlying.
- 

Q.3377 A European put option is selling for \$4.00 with an underlying priced at \$52. The exercise price is \$50, and the underlying makes no cash payments during the life of the option. The risk-free rate is 6.0%, and the option expires in 120 days. A call with the same exercise price and expiry sells for \$8.50. This put is *most likely*:

- A. overvalued by \$0.33.
  - B. undervalued by \$1.55.
  - C. undervalued by \$0.58.
- 

Q.3397 A three-month call option with an exercise price of \$55 is being sold for \$8. A three-month Treasury bond is being sold in the marketplace with the same face value as the option's exercise price. The underlying is currently worth \$60, and the risk-free rate is 4.30%. Assuming the put-call parity holds, a put option is being sold for:

- A. \$0.73.
  - B. \$2.42.
  - C. \$12.34.
-

Q.4176 Assume a two-year put on a stock of Lakeview Inc. has a price of \$9 and an exercise price of \$89. A forward contract expiring in two years has a forward price of \$92. If the risk-free interest rate is 8%, the price of the call option using put-call forward parity is *closest to*:

- A. \$10.57
  - B. \$11.57
  - C. \$15.00
- 

Q.4177 Which of the following positions *most likely* has the same no-arbitrage value as the long put option?

- A. Long underlying and short call option.
  - B. Short put options, short underlying, and long risk-free bonds.
  - C. Long risk-free bond, long call option, and short underlying.
- 

Q.4178 Which of the following *most likely* represent the no-arbitrage value of a fiduciary call position?

- A. Long put, Long stock, Short bond.
  - B. Long put, Long Stock.
  - C. Short put, Short stock, Long bond.
- 

Q.4180 Consider options and forward the contract expiring in 70 days. The exercise price of options is AUD 87, and the risk-free rate is 4.5%. If the call price is AUD 18.5 and the forward price is AUD 95, the put premium is *closest to*:

- A. AUD 8.95.
  - B. AUD 10.57.
  - C. AUD 11.34.
-

Q.4181 Tanya Glen is an investor who wants to take a position in a six-month forward contract. The put price value exceeds the call value by \$12, with both having the exercise price of \$90, and the risk-free rate is 6%. Assuming that options expire in six months, the forward price is *most likely*:

- A. less than the exercise price.
  - B. more than the exercise price.
  - C. not known due to the lack of sufficient information.
-

## **Learning Module 10: Valuing a Derivative Using a One-Period Binomial Model**

Q.3898 Consider a call option on a stock price that is currently at \$50. The exercise price of the option is \$52, and the risk-free rate is 5%. If the stock price can rise by 20% or fall by 25%, the value of the option using the one-period binomial model is *closest to*:

- A. 0.67.
  - B. 2.11.
  - C. 5.10.
- 

Q.4189 An analyst is considering buying a one-year call option on a non-dividend-paying stock with an exercise price of \$100. The current stock price is \$95. The stock price is expected to go up or down by 18% in one year. Assume a risk-free rate of return is 4%. The number of units that the analyst needs to buy to create a risk-free portfolio is *closest to*:

- A. 0.35
  - B. 0.45
  - C. 2.90
- 

Q.4190 Consider a one-year put option on a non-dividend paying stock with an exercise price of \$50. The current stock price is \$47. The stock price is expected to go up or down by 25%. The value of the hedged portfolio today, if the risk-free rate of return is 4%, is *closest to*:

- A. \$5.96
  - B. \$35.46
  - C. \$38.66
- 

Q.4191 Which of the following is *most likely* true regarding the price of a call option if the up gross return is increased in a one-period binomial model? The price of a call option will:

- A. increase
- B. decrease
- C. remain the same

---

Q.4192 Consider a one-year call option on a non-dividend stock. The current stock price is \$70. The value of the perfectly hedged portfolio (combination of call option and underlying asset) after one year is \$16.50. If the hedge ratio is 0.65 and the risk-free rate is 1.5%, the no-arbitrage price of the call option is *closest to*:

- A. \$16.26
  - B. \$29.24
  - C. \$45.50
- 

Q.4193 Rose Associates is holding non-dividend stocks of Xerox limited. The stock's current value is USD 100, and in one year, the price can go up by 11% or down by 8%. The current risk-free rate is 3 percent, and the exercise price is USD 99. The risk-neutral probability of an up-move and down-move for a 1-year European call option on the stock is *closest to*:

- A. Up-move = 0.58; Down-move = 0.42
  - B. Up-move = 0.11; Down-move = 0.89
  - C. Up-move = 0.68; Down-move = 0.32
- 

Q.4194 Which of the following *best* describes the idea behind the risk-neutral pricing formula in the one-period binomial model? The option price is equal to the:

- A. Discounted value of the perfectly hedged position at maturity.
  - B. Expected value using the real-world probabilities discounted at a risk-free rate.
  - C. Expected value using the risk-neutral probabilities discounted at a risk-free rate.
-

Q.4195 John Crewe is an analyst at Predict Inc. Some of Crewe's clients have significant non-dividend holdings at Finlay, a tea processing company in Kenya. Crewe anticipates Finlays' stock price will rise next year and advises his clients to buy one-year call options at an exercise price of \$80. Finlay's spot price is \$80, and the risk-free interest is 0.45%. Crewe estimates that there is an equal chance that the stock price will rise or fall by 10%. The risk-neutral price of the option is *closest to*:

- A. \$4.16.
  - B. \$4.78
  - C. \$8.00.
-