FRM Part I Exam

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Questions - Financial Markets and Products

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Reading 25: Banks

Q.1093 Banks face the following main risks:
I. The risk that counterparties in loan/derivative transactions will default
II. The possibility that the banks' assets and financial instruments will decline in value due to movement in key market variables
III. The possibility that internal system failures or external events will lead to significant losses

The types of risks described here are:

A. Credit risk, operational risk, and market risk, respectively.

B. Operational risk, market risk, and credit risk, respectively.

C. Market risk, operational risk, and credit risk, respectively.

D. Credit risk, market risk, and operational risk, respectively.

Q.1094 Prime Bank, a recently licensed deposit-taking Sacco, is considering raising capital to fund an ambitious expansion plan aimed at transforming it into a "tier one" bank within the next five years. Which of the following statements **best explains** why the bank's directors might prefer a rights issue as opposed to subordinated long-term debt?

A. Subordinated long-term debt is more expensive than equity finance.

B. Existing shareholders might block attempts to increase debt capital.

C. Equity finance provides more protection against extreme events, compared to debt finance.

D. Existing shareholders have pre-emptive rights.

Q.1095 Distinguish between regulatory capital and economic capital.

A. Regulatory capital is the amount of capital a bank is required to hold in accordance with regulatory guidance to sufficiently mitigate the risk of failure, whereas economic capital is the amount of capital a bank needs as prescribed by its own (risk) models.

B. Regulatory capital is the amount of capital a bank needs as prescribed by its own (risk) models, whereas economic capital is the amount of capital a bank is required to hold to sufficiently mitigate the risk of failure.

C. Regulatory capital is the amount of capital a bank needs to hold in accordance with stipulated rules and regulations while economic capital is the amount of capital every bank needs to deposit at the Federal Reserve Bank.

D. Regulatory capital is the amount of capital a bank needs to hold in cash at any given time. In contrast, economic is the total amount of capital held, including cash deposits and tangible/intangible financial assets.

Q.1096 Following several high-profile bank failures, the Central Bank of a certain Asian country is advocating the creation of a deposit insurance corporation to protect depositors in the event that banks fail in the future. How might the establishment of the corporation create a **moral hazard**?

A. Banks might refuse to make premium payments to the corporation, crippling it financially in the process.

B. Depositors might channel more of their savings to banks, reducing investments in other sectors of the economy.

C. Banks may increasingly venture into risky businesses that would not otherwise be feasible.

D. The corporation may encourage banks to manipulate accounts so as to appear healthier than they actually are, hence be eligible for lower premium payments.

Q.1097 As the chief officer in charge of bank risk monitoring at the Federal Reserve Bank, Peter Musk is asked to advise the regulator on the best strategy to curb moral hazards among banks after the establishment of a deposit insurance agency. Mr. Musk could most likely advise the regulator to:

A. Crack down on banks caught in paying their senior management excessive sums.

B. Direct the agency to demand all details of each bank’s transactions on a regular basis.

C. Direct the agency to tailor premiums payable according to each bank’s risk level.

D. Abolish the deposit insurance agency altogether.

Q.1098 Losses resulting from employee fraud form part of:

A. Market risk.

B. Liquidity risk.

C. Credit risk.

D. Operational risk.

Q.1101 An investment bank is approached by a manufacturing company that wishes to raise funds to finance an ambitious factory expansion plan. If the bank decides to raise the required funds via a private placement, this means that:

A. The bank will provide the funds itself without enlisting any third-party investor.

B. The bank will sell the desired security to a few large investors such as insurance companies.

C. The manufacturing company will only accept proposals/bids from privately owned limited liability companies.

D. The bank must sell the securities to one and only one investor.

Q.1103 A public offering on a best efforts basis is a security sale whereby:

A. The issuer works with multiple investment banks as underwriters.

B. The underwriter does as well as they can to place securities with investors and get's paid a fee commensurate with the extent of its success.

C. The underwriter buys the securities and then sells them to investors at a premium.

D. The issuer does not enlist the services of an underwriter but instead offers securities to investors directly.

Q.1104 ABC Company Limited is not publicly traded, but its directors contend the company cannot self-fund further expansion. Directors approach an investment bank intending to create 50 million shares but haven't yet settled on an appropriate price per share. Under these circumstances, the company is most likely to issue a:

A. Best efforts IPO.

B. Rights issue.

C. Firm commitment.

D. Private placement.

Q.1105 A company intends to employ the Dutch Auction Approach (DAA) to sell 1 million shares. It receives the following bids:

Bidder	Number of shares	Price per share
A	200,000	$40.50
B	150,000	$39.50
C	400,000	$41.00
D	100,000	39.40
E	300,000	39.00
F	50,000	38.75
G	120,000	37.00

Which of the following is closest to the price all successful buyers will pay per share?

A. 37

B. 41

C. 40.5

D. 39

Q.1107 Which of the following is **the most realistic** source of conflict of interest when all the commercial banking, investment banking, and securities services are conducted under the same corporate umbrella?

A. The three units might not get along, particularly if one or two perform very poorly compared to the other

B. The investment segment might work with competitors to paint the commercial segment in a bad light and therefore obtain preferential treatment from shareholders

C. In the process of lending money to a company, the commercial segment may be tempted to share confidential information about the borrowing company with the investment segment which may, in turn, forward the information to a potential takeover bidder

D. None of the above

Q.3492 Which of the following statements is/are accurate?

I. In a "best effort offering," the underwriters buy an issue and use their best effort to sell the issue to investors.
II. In an "underwritten offering," the underwriters buy an issue and then attempt to sell the issue to investors.
III. A "best effort offering" is the most common type of offering.

A. I & III only

B. II & III only

C. II only

D. All of the above

Q.4883 Which of the following best defines a broker's discretionary account?

A. An account where the broker can trade the investor's funds without the investor's explicit consent.

B. An account where a trader can buy and sell privately traded securities only

C. An account that holds securities traded solely for the benefit of the broker, not investors.

D. An account that doesn't have to comply with the rules set by the Securities and Exchange Commission.

Q.4884 What is the difference between a banking book and a trading book as used in banks?

A. The banking book consists of assets on the bank's balance sheet expected to be held until maturity while the trading book consists of assets that are available for sale.

B. The banking book consists of assets held on the bank’s balance sheet while the trading book consists of assets held off the balance sheet.

C. The banking book reports assets whose value if fixed (e.g. fixed income bonds) while the trading book reports assets whose value fluctuates in response to market variables.

D. The banking book only shows primary financial instruments such as cash while the trading book shows secondary financial derivative instruments such as interest rate futures and options.

Q.4885 Which of the following is an example of a poison pill?

A. Providing attractive stock options to key workers that can be exercised in the case of a takeover.

B. Issuing preferred shares that immediately convert to common shares in the case of a takeover.

C. Adding a clause to the company's charter prohibiting a new owner from firing existing directors for a period of time.

D. All of the above.

Q.4886 Which of the following are offers that can be made by the acquiring company in a takeover?

A. Cash offer.

B. Share-for-share offer.

C. Combination of a cash offer and a share-for-share exchange.

D. All of the above.

Q.4887 The following table shows information about the bid and bidders in a Dutch Auction to sell 10,000 shares.

Bidder	Number of Shares	Price (USD)
A	1,500	40
B	1,000	36
C	2,500	45
D	3,000	43
E	4,500	35
F	2,000	42
G	4,000	44

At what price are the shares sold?

A. 44

B. 42

C. 36

D. 40

Reading 26: Insurance Companies and Pension Plans

Q.1108 Which one of the following statements regarding traditional whole life insurance is **incorrect**?

A. The beneficiary receives the sum assured only on the death of the insured.

B. The payout time is known with certainty.

C. The insured pays premium throughout their life.

D. Premiums payable usually remain fixed throughout.

Q.1109 Under term life insurance, the sum assured is payable only if:

A. The insured dies within the specified time period.

B. The beneficiary is alive at the end of the specified term.

C. The insured lives beyond the specified term period.

D. The beneficiary dies within the specified term period.

Q.1111 A noncontributory group life insurance contract is a policy where:

A. Premium payments are made only in the first year, without further payments in later years.

B. Premium payments are shared by the employer and the employee.

C. The employer pays the premium in full, without financial input from employees.

D. The insured company and its employees are offered free life insurance, in exchange for free goods and services.

Q.1112 The following data gives the mortality experience among males in Europe in 1931.

Age in years	Probability of death within one year	Survival probability	Life expectancy
30	0.001419	0.97372	47.52
31	0.001445	0.97234	46.59
32	0.001478	0.97093	45.65
33	0.001519	0.97093	44.73

Calculate the probability of a new-born male dying between his 30th and 31st birthday.

A. 0.97372

B. 0.99862

C. 0.001418

D. 0.00138

Q.1113 The following data gives the mortality experience among males in Europe in 1931.

Age in years	Probability of death within one year	Survival probability	Life expectancy
30	0.001419	0.97372	47.52
31	0.001445	0.97234	46.59
32	0.001478	0.97093	45.65
33	0.001519	0.97093	44.73

Calculate the probability of a man aged 30 dying in the **second** year?

A. 0.001407

B. 0.001443

C. 0.998557

D. 0.001445

Q.1114 The following data gives the mortality experience among males in Europe in 1931.

Age in years	Probability of death within one year	Survival probability	Life expectancy
30	0.001419	0.97372	47.52
31	0.001445	0.97234	46.59
32	0.001478	0.97093	45.65
33	0.001519	0.97093	44.73

Assuming that: I. Interest rate = 4% II. Premiums are paid annually in advance (at the beginning of the year) III. Compounding is semi-annual. A 30-year-old man takes up a term insurance policy that expires in two years.Calculate the expected payout given that the policy has a sum assured of $100,000. (Assume that deaths occur mid-way through the year).

A. 144.62

B. 275.09

C. 283.42

D. 125

Q.1115 The following data gives the mortality experience among males in Europe in 1931.

Age in years	Probability of death within one year	Survival probability	Life expectancy
30	0.001419	0.97372	47.52
31	0.001445	0.97234	46.59
32	0.001478	0.97093	45.65
33	0.001519	0.97093	44.73

Assuming that:
I. Interest rate = 4%
II. Premiums are paid annually in advance (at the beginning of the year)
III. Compounding is semi-annual

If the policy has a sum assured of $100,000, and a 30-year-old man takes up a term insurance policy that expires in two years, then which of the following is closest to the break-even premium payable by the policyholder?

A. 140.37

B. 123.62

C. 150

D. 80

Q.1116 How does an increase in longevity risk affect the profitability of lifelong annuity contracts?

A. It increases profits made by the insurer.

B. It decreases the profits made by the insurer.

C. It reduces the return on investment to the policyholder.

D. It has no effect on profitability.

Q.1117 How does increased mortality risk affect the profitability of life insurance contracts?

A. It increases profits made by the insurer.

B. It decreases the profits made by the insurer.

C. It reduces the return on investment to the policyholder.

D. It has no effect on profitability.

Q.1118 Which of the following strategies presents the best way to deal with longevity and mortality risks in the insurance business?

A. Adding a substantial risk premium to the final break-even premium payable.

B. Avoiding high-risk business.

C. Reinsurance.

D. Using a high interest rate.

Q.1119 Richard Brad, FRM, owns a high-rise mixed-use building located in the heart of London. Although he has complied with all quality and safety standards, he fears that a major accident, such as a fire, might result in injuries to residents and third parties and he might be forced to pay for such damages. To protect his building and avoid losses resulting from large-scale compensations, Mr. Brad could most likely:

A. Make life insurance and disability insurance mandatory requirements for every tenant as well as visitors.

B. Reinsure the building against large-scale loss.

C. Seek property insurance.

D. Seek property-casualty insurance.

Q.1120 Which of the following is a good example of moral hazards under property insurance?

A. Faking of death.

B. Legal suits filed by third parties for losses incurred the moment they realize that the party at fault is insured.

C. A tendency to leave a car unlocked after successfully insuring it against theft.

D. A bank taking fewer risks after benefiting from government-sponsored deposit insurance.

Q.1121 If an insurance company offers the same premium to both smokers and non-smokers, it is likely to attract high-risk policyholders and might contend with more payouts than initially expected. This problem is called:

A. Moral hazard.

B. Poor selection.

C. Adverse selection.

D. Adverse risk modeling.

Q.1122 The main difference between a defined benefit scheme and a defined contribution scheme is that:

A. While defined benefit schemes are employer-sponsored, defined contribution schemes are run by employees who contribute funds for investment with no input from employers.

B. Defined contribution schemes last for a maximum of 40 work-years while there's no time limit for defined benefit schemes.

C. Defined benefit schemes are tax-deductible but defined contribution schemes are not.

D. A defined benefit scheme promises a specific income whereas, with a defined contribution scheme, the income depends on factors such as the size of monthly contributions and investment performance.

Q.4888 Which of the following factors poses the **greatest** risk of loss to whole life insurance business?

A. Low rates of interest.

B. Mortality risk.

C. Longevity risk.

D. Currency risk.

Q.4889 Which of the following types of property insurance poses the greatest risk of loss for an insurer?

A. Fire insurance.

B. Theft insurance.

C. Insurance against automobile accidents.

D. Insurance against natural disasters.

Q.4890 In contrast whole life insurance premiums, health insurance premiums:

A. Always increase from year to year.

B. May increase or decrease from year to year.

C. May increase from year to year or remain constant.

D. Always remain constant throughout the holder's life.

Q.4891 The following data gives the mortality experience among males in Europe in 1931.

Age in years	Probability of death within one year	Survival probability	Life expectancy
30	0.001419	0.97372	47.52
31	0.001445	0.97234	46.59
32	0.001478	0.97093	45.65
33	0.001519	0.97093	44.73

What is the probability that a man aged 30 will live to age 33?

A. 0.9454

B. 0.9971

C. 0.0255

D. 0.0029

Q.4892 Which of the following is the best definition of variable life insurance?

A. Whole life assurance with an investment component.

B. The policyholder makes a lump sum payment to the insurer in exchange for a stream of regular payments for a specified period of time.

C. Term life insurance that is renewable on expiry.

D. whole life assurance with an investment component and which gives the policyholder a lot **more flexibility** in terms of the premium payable.

Reading 27: Fund Management

Q.1123 Robert Jobs, FRM, has historically invested in multiple stocks. After incurring significant losses on his investments, he decides to liquidate most of his holdings in favor of a mutual fund. Which of the following best explains why a mutual fund might be better than multiple investments spread across several industries?

A. Mutual funds are considered immune from the effects of financial crises.

B. Mutual funds are more profitable than individual investments in the long-run.

C. Mutual funds allow investors to diversify risks in a way multiple stock investments cannot.

D. Mutual funds are easier to manage compared to multiple stock investments.

Q.1124 An investor joins a mutual fund and buys shares at $200 each. In the trading course, the fund leads to a capital gain of $15 per share in the first year and a capital loss of $20 per share in the second year. If the investor decided to sell the shares during the second year, what would be the purchase price to calculate the capital gain/loss on the transaction during the second year?

A. $200

B. $215

C. $195

D. $205

Q.1125 Funds that are designed to track a particular equity index such as the S&P 500 are known as:

A. Open-end funds.

B. Closed-end funds.

C. Equity index funds.

D. Hedge funds.

Q.1126 Michael Bauer wishes to buy shares in a front-end loaded mutual fund. He is likely to:

A. Pay a front-end purchase fee at the time of purchase.

B. Pay a back-end purchase fee at the time of purchase.

C. Pay a front-end fee whenever he decides to sell his shares.

D. Pay a back-end purchase fee when he decides to sell the shares.

Q.1127 Describe the meaning of hurdle rate in regard to hedge funds.

A. The minimum rate of return necessary for fund managers to be paid.

B. The minimum rate of return necessary for the incentive fee to be applicable.

C. The highest peak in value that an investment fund or account has reached.

D. The lowest value that an investment fund or account has reached.

Q.1128 The following statements regarding open-end mutual funds are correct, EXCEPT:

A. The funds offer investors professional management.

B. The funds offer investors a guaranteed rate of return.

C. Shares are redeemed at net asset value.

D. Investors are free to sell their holdings at will.

Q.1129 Consider the following statements regarding closed-end mutual funds:
I. Funds are redeemed at their NAVs.
II. Shares at times trade at a premium to the NAV.
III. Shares at times trade at a discount from the NAV.
IV. The funds offer investors professional management.

Which of the statements above is/are correct?

A. Only I is correct.

B. Only I and II are correct.

C. II, III, and IV only.

D. All of the statements are correct.

Q.1130 Proud Mutual Fund had year-end assets worth $335 million and liabilities of $68 million. Given that there were a total of 100,000 shares outstanding, compute the NAV.

A. 120

B. 2,600

C. 1,500

D. 2,670

Q.1131 Brighter Market Portfolio had end-year liabilities amounting to $43 million and assets worth $279 million. Given that the fund's NAV was $20, how many shares must have been held in the fund?

A. 5000 shares.

B. 11,000,000 shares.

C. 11,800,000 shares.

D. 10,000,000 shares.

Q.1132 When most actively managed mutual funds are compared to index funds such as the S&P 500, they:

A. Beat the market return in most years.

B. Underperform the market.

C. Generally do not outperform the market.

D. Exceed the return earned on index funds.

Q.1133 Transaction costs and management expenses of money market mutual funds may include:

A. Back-end loads.

B. Front-end loads.

C. 12b-1 charges.

D. All the above.

Q.1134 Which of the following statements is correct regarding hedge funds?

A. Hedge funds are subject to the Investment Company Act of 1940 and the Securities Act of 1933.

B. Hedge funds outline their investment agenda in their prospectus.

C. Hedge funds must be set up as partnerships and have to provide detailed investment strategies to investors.

D. A majority of hedge funds commit to the use of leverage and short-selling and have a wide investment latitude, including land, derivatives, stocks, currencies, real estate, etc.

Q.1135 Which of the following financial institutions **must** provide to all investors the information regarding portfolio composition?

A. Mutual funds.

B. Hedge funds.

C. Both mutual funds and hedge funds.

D. None of the above.

Q.1136 Which of the following best describes the long/short equity hedge fund strategy?

A. Taking a long position in undervalued stocks and a short position in overvalued stocks.

B. Taking a long position in overvalued stocks and a long position in undervalued stocks.

C. Taking a long position in both overvalued and undervalued stocks.

D. Taking a long position in overvalued stocks.

Q.1137 Washington Mutual Fund had year-end assets worth $240 million and liabilities of $12 million. Given that there were a total of 1,000,000 shares outstanding, which of the following is closest to the net asset value (NAV) of the fund?

A. 240

B. 220

C. 20

D. 228

Q.3493 An analyst gathered the following information regarding a mutual fund:

- Total shares outstanding: 500,000 shares.
- Assets: $1,000,000.
- Liabilities: $300,000.

What is the fund's net asset value (NAV)?

A. 2

B. 1.4

C. 0.6

D. 0.7

Q.3494 Which of the following is/are the correct statements regarding similarities and differences between exchange-traded funds and closed-end funds?
I. Both types of funds are passively managed to match a particular index.
II. In both types of funds, the market price of shares and the net asset value (NAV) can differ significantly.
III. Both types of funds can be sold and purchased on the open market.

A. III only.

B. I & III only.

C. I & II only.

D. All of the above.

Q.3496 Which of the following is a correct characteristic of hedge funds?

A. Hedge funds are usually listed on exchanges.

B. Management fees are a fixed percentage of the funds under management, but managers also collect fees based on performance.

C. Hedge funds are readily available to all investors.

D. Hedge funds are free to advertise to the public.

Q.3497 Restrictions on redemptions of funds invested in hedge fund until the specific time during which withdrawals are not allowed is called:

A. Redemption restriction.

B. Lock-up period.

C. Non-withdrawal period.

D. High-water mark.

Q.3498 Anna Smith is a hedge fund manager who tries to exploit price discrepancies between convertible bonds and common stocks of companies. The strategy that Smith uses is known as:

A. Long/short equity.

B. Corporate arbitrage fixed income.

C. Equity market neutral strategy.

D. Convertible arbitrage fixed income.

Q.3499 A hedge fund has a beginning year value of $200 million, 2% management fee, and 20% incentive fee with a hurdle rate of 10%. The management fee is applied to the end-of-year assets under management, and the incentive fee is calculated net of the management fee. If the fund's ending value is $300 million, then what is the total fee of the hedge fund?

A. $18.8 million.

B. $20.8 million.

C. $14.8 million.

D. $6 million.

Q.3500 A hedge fund has a beginning year value of $370 million and a 2 plus 20 fee structure with no hurdle rate or watermark. The hedge fund structure is set up such that the management fee is calculated on the assets at the beginning of the year and that the incentive fee is calculated net of the management fee. If the fund's ending value is $400 million, then what are the total fees paid to the hedge fund for the period?

A. $12.4 million.

B. $11.92 million.

C. $16 million.

D. $4.4 million.

Q.3502 Mega Star Investment is a hedge fund with $550 million initial capital and a '2 and 20' fee structure. The 2% management fee is based on year-end assets under management and the 20% incentive fee is not independent of the management fee. The value of the fund at the end of year one is $652 million. What is the investor's net return?

A. 0.1247

B. 0.1294

C. 0.1531

D. 0.1779

Q.3503 Rosy Garcia is considering investing in a hedge fund or a fund of funds.
Garcia invests $50 million in the hedge fund and receives a yearly gross return of 10%. The fund has a '2 and 20' fee structure with no hurdle rate, and management fees are calculated on an annual basis on assets under management at the beginning of the year. Incentive fees are calculated independently of management fees.

Garcia also invests $60 million in a fund of funds (FOF) and earns a 5% yearly gross return. Assuming that the fund of funds fee structure is '1 and 10' and that all other fee structures in the FOF are similar to that of the hedge fund, the return to the investor of investing directly in the hedge fund will be:

A. 2.5% greater than the return generated by investing in the FOF.

B. 2.3% greater than the return generated by investing in the FOF.

C. 3.1% greater than the return generated by investing in the FOF.

D. Lower than the return generated by investing in the FOF.

Q.3504 Right-Lance Capital is a hedge fund with $250 million as initial investment capital. A 2% management fee based on assets under management is charged at the beginning of the year, and a 20% incentive fee is charged on the performance net of management fees. In the first year of operations, the fund earned a return of 16%.
What is the investor's effective return given this fee structure?

A. 0.1094

B. 0.112

C. 0.125

D. 0.0943

Q.3505 Clock Limited is a hedge fund with a total asset base of $10 million. The fund charges a 2% management fee based on assets under management at year-end and a 20% incentive fee in excess of a 0.5% hurdle rate. During the first year, the fund appreciates by 15%. If incentive fees are calculated independently and management fees are calculated at year-end, what is the investor's return net of performance fees?

A. 0.068

B. 0.081

C. 0.098

D. 0.0852

Q.3506 Which of the following statements correctly describes a fixed income arbitrage hedge fund strategy?

A. This strategy seeks beta-positive investment strategies.

B. This strategy seeks to employ a pricing discrepancy between related securities.

C. This strategy involves buying a convertible bond of one issuer while selling another issuer's common stock.

D. This strategy seeks to make investment decisions guided by the economic/political outlook of a country.

Q.3507 Which of the following is *NOT* a characteristic of open-ended mutual funds?

A. Open-end funds accept new investment money and issue additional shares to existing or new investors. Therefore, the number of outstanding shares changes after every new investment.

B. In open-end funds, new shares are created and sold at a premium or a discount to net assets values depending on the demand for the shares.

C. An open-end structure makes it easy to grow in size but creates pressure on the portfolio manager to manage the cash inflows and outflows.

D. None of the above

Q.3508 In an open-end fund:

A. Shares are issued and are traded in secondary markets.

B. Investors can redeem their shares at any point in time at net asset value.

C. Investors cannot redeem shares for a certain number of years that are specified at the initiation of the contract.

D. None of the above.

Q.3509 MZJ Income Fund is a mutual fund that does not issue new shares, and its shares can only be bought or sold like equity on exchange markets. Identify this type of fund.

A. Closed-end fund.

B. Open-end fund.

C. Exchange-traded fund.

D. Hedge fund.

Q.3510 The Belta fund trades on the Chicago Stocks Exchange. Its most recent price is $1850, but its NAV is $1,600. We know then that:

A. the fund is closed-end, selling at a premium.

B. the fund is closed-end, selling at a discount.

C. the fund is open-end, selling at a premium.

D. the fund is open-end, selling at a discount.

Q.4932 Hedge funds managers are compensated by:

A. deducting management fees from fund assets and receiving incentive bonuses for beating a specified benchmark.

B. deducting a percentage of any gains in asset value.

C. Buying shares in the fund at a discount.

D. charging portfolio turnover fees.

Q.4933 On January 1, 2020, a hedge fund began with $100 million in assets from investors. The 10-year Treasury, yielding 1.25% at the time, was chosen as the hurdle rate for the next five years. In addition, the fund operates on a 2 plus 20% fee structure and is bound by a high-water mark clause. In the first year of operation, a combination of a challenging macroeconomic environment and some bad decisions culminated in end-of-the-year assets under management dropping to $90 million. In 2021, the fund bounced back, with its total assets coming at $110 million by the end of the year. Calculate the total fees earned by the management in 2021. (Assume that the management fee is calculated on the assets at the beginning of the year and that the incentive fee is calculated after subtracting management fees)

A. $5.8m

B. $1.8m

C. $3.5m

D. $2.94m

Q.27 Allan enters into a derivative contract with one of his clients. The client is expected to sell the underlying asset to Allan at the expiration date at price P. Allan wishes to fully hedge his position using derivatives. Which of the following can help him achieve his goal?

A. Sell a p-strike call.

B. Purchase a p-strike call and sell a p-strike put.

C. Sell a p-strike call and buy a p-strike put.

D. Subscribe to a long forward contract with a forward price P.

Q.28 Matthew enters into a derivative position with one of his real estate customers. Under the terms of the contract, the customer is obligated to sell the underlying asset to Matthew if the spot price at the expiration is more than P. Matthew, on the other hand, has the right to sell the underlying asset to the customer if the spot price at expiration is less than P. Which of the following describes Matthew's position?

A. Matthew enters into a short forward contract.

B. Matthew enters into a long forward contract.

C. Matthew purchases a P-strike call and a P-strike put.

D. Matthew purchases a P-strike call and sells a P-strike put.

Q.587 Mehmet Emre, an FRM part 1 candidate, is preparing for his upcoming exam. From his understanding of futures exchanges, he has concluded the following:

I. In futures exchanges, traders do not have to worry about the creditworthiness of the counterparty
II. In futures exchanges, the trades are more standardized than they would be for similar forwards contracts
III. In futures exchanges, participants have to deposit an initial margin with the clearinghouse of the exchange

Which of these features of futures exchanges are accurate?

A. Feature II only.

B. Feature III only.

C. Features I and II.

D. Features I, II, and III.

Q.588 Before the credit crisis of 2007, over-the-counter (OTC) markets were not as regulated as exchanges. However, after the credit crisis, many new important changes were brought into the US and around the world to align the operations of OTC markets with exchange-traded markets. Which of the following is not a change/regulation introduced after the 2007 credit crisis?

A. Standardized OTC derivatives must be traded on swap execution faculties (SEFs) introduced in the US.

B. Central counterparty (CCP) is required in standardized derivatives transactions.

C. All the OTC trades must be reported to a central registry.

D. Participants of OTC derivatives must publicly disclose their initial and maintenance margin positions.

Q.589 David Dillion, head of the treasury department of Dutch Monks Corp., entered into a derivative contract to purchase ₺350 million (Turkish lira) 3-month forwards from a Lirika Bank 3-month forward exchange rate of ₺3.9 per euro. Which of the following correctly describes Lirika Bank's position on the euro?

A. Short forward contract.

B. Long forward contract.

C. Short futures contract.

D. Long futures contract.

Q.590 A trader at Prime Investments entered into a derivatives contract to purchase one lot (or 100 troy ounces) of gold at the price of $1,200/ounce and take delivery 3 months from now. Determine the appropriate position of the trader in the derivatives contract.

A. A long gold futures contract.

B. A long dollar futures contract.

C. A long gold forward contract.

D. A short dollar forward contract.

Q.591 Which of the following equations accurately demonstrates the payoff of the short position holder in a forwards contract?

A. $K - S_T$

B. $S_T - K$

C. $\max(0, X - S_T)$

D. $\max(0, S_T - X)$

Q.592 A number of derivatives are used to hedge the risk or earn a profit with speculation and arbitrage strategies. Forwards, futures and options are different from each other in terms of their properties. Which of the following statement correctly differentiates forward, futures, and options?

A. Forward contracts and options are different from futures, as it takes a certain cost to enter into a forward contract.

B. Options and futures are different from forwards contracts as they give an option or futures contract holder the right, but not the obligation, to exercise the contract.

C. Forwards and futures are different from options because the holder of the forwards and futures are obligated to buy or sell the underlying.

D. Forward contracts and options are different from futures because forwards and options trade on OTC markets.

Q.593 Kapil Kumar is an individual investor who invests a portion of his salary in stocks and derivatives at the beginning of every month. Kumar is interested in the stocks of Geneva Computers Inc., which are currently trading at the price of $14. However, he believes the stock will trade above $17 at the beginning of next month. If Kapil is interested in entering into an options contract that gives him the right to take exposure in the stock at $17, then suggest the most appropriate option position for Kumar.

A. A long call option with a strike price of $14.

B. A short call option with a strike price of $17.

C. A long put option with a strike price of $17.

D. A Short put option with a strike price of $14.

Q.594 Consider a European call option for 100 shares of Tesla, Inc., whose strike price is $870 per share and which matures 12 months from now. What does this option entitle you to do?

A. Between now and 12 months from now, you are entitled to make a phone call to the European headquarters of Tesla, Inc., to inquire about the value of 100 shares.

B. Between now and 12 months from now, you have the right, but not the obligation to purchase 100 shares of Tesla, Inc., for $870 per share.

C. At the maturity date, that is 12 months from now, you have the right, but not the obligation to sell 100 shares of Tesla, Inc., for $870 per share

D. At the maturity date, that is 12 months from now, you have the right, but not the obligation to purchase 100 shares of Tesla, Inc., for $870 per share.

Q.595 Which of the following options requires a party to purchase the underlying asset at a specific date?

A. European short call option.

B. American short call option.

C. American short put option.

D. European short put option.

Q.596 Nisha Jatoi, a lecturer at the Karachi School of Business, is delivering a lecture on the subject of Introduction to Derivatives. While discussing the details of derivatives, specifically options contracts, she presented the following properties of options in her slideshow:
I. The price of a call option increases as the exercise price decreases.
II. The price of a put option increases as the exercise price increases.
III. The values of both American call and put options increase as time to maturity increases.

Which of these properties are correct?

A. Properties I and II.

B. Properties II and III.

C. Properties I and III.

D. Properties I, II, and III.

Q.597 A trader sold five July put options, each at $7.60, pledging to buy 500 shares of Galaxy Carpets Co. at a price of $13.50 per share. If at maturity of the contract, Galaxy Carpet's stock is trading at $9.30 per share, then which of the following statements accurately describes the net cash flow of the transaction?

A. The trader profited $3,800 from the transaction.

B. The trader lost $2,100 from the transaction.

C. The trader profited $2,100 from the transaction.

D. The trader profited $1,700 from the transaction.

Q.598 Steve Hellmuth, a former derivatives trader, runs an online derivatives investment and trading tutorial portal. Every weekend he educates hundreds of subscribers through weekly webinars. In his last webinar, he presented the following properties of each trader type:

I. Hedgers use derivatives to guard against the risks related to future movements in market prices of underlying variables.

II. Arbitrageurs use derivatives to bet on the direction of the market of underlying variables.

III. Speculators use derivatives to take offsetting positions in two or more instruments and markets to earn a profit.

Which type of derivatives trader did Hellmuth define inappropriately?

A. Speculators only.

B. Hedgers and speculators.

C. Arbitrageurs and speculator.

D. Hedgers and arbitrageurs.

Q.599 Donald Brown, an investment manager at a pension fund, manages a portfolio of twenty stocks. Brown is long the stocks of Blue Blue Moon Inc., and he believes that the value of the stock of Blue Motors Inc., which forms part of the portfolio, can decrease due to an increase in oil prices. After analyzing the fundamentals of the stock, Brown decides to take a long position in put options on Blue Motors Inc. stocks. The given transaction appropriately categorizes Donald Brown as a:

A. Speculator.

B. Hedger.

C. Market maker.

D. Arbitrageur.

Q.600 Hedgers use a number of derivatives to neutralize their risk by taking long or short positions in derivatives. These derivatives differ in costs and features. Which of the following type of derivatives provides a type of insurance to the hedger to protect against unfavorable movement and benefit from favorable movement in the underlying variable?

A. Forward contracts.

B. Futures contracts.

C. Options.

D. None of the above.

Q.601 Samuel Simpson is a commodities trader at one of the largest asset management firm in Abu Dhabi. He believes that due to a resolution passed by all members of the OPEC committee to cut the supply of oil, the prices of oil are expected to increase. In order to capitalize on his vision, Simpson purchased 2,000 lots of crude oil futures for the price of $45.6 per barrel. Which type of derivatives trader is Samuel Simpson?

A. Speculator.

B. Hedger.

C. Option trader.

D. Arbitrageur.

Q.602 In which of the following is the holder of the derivative instrument exposed to limited downside risk or limited losses?

A. Long futures contract.

B. Long put option

C. Short call option.

D. All of the above

Q.603 Assume stock K trades on the New York Stock Exchange (NYSE) and the London Stock Exchange (LSE). The stock currently trades on the NYSE for $50 and on the LSE for £39. Given the current exchange rate is 1.2658 $/£, determine the amount of arbitrage profit that could possibly be earned.

A. $0.82

B. $1.25

C. $0.63

D. Zero: there's no opportunity for arbitrage

Q.3511 Which of these is *NOT* a characteristic of over-the-counter options?

A. Large traders trade over large sums of money.

B. They are often used to hedge interest rate risks and currency fluctuation risks.

C. Participants have the freedom to negotiate deals.

D. They are highly regulated.

Q.3512 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.

D. Flexible and easily customizable.

Q.3515 If Michael Emery takes a long position in copper futures, which of the following parties will take the opposite position to the futures contract?

A. Another investor/trader.

B. The clearinghouse.

C. A large commercial bank.

D. None of the above.

Q.3516 The everyday process of adjusting the margin for the gains and losses on the value of futures contracts is known as:

A. Marking to market.

B. Value adjusting.

C. Clearing.

D. Initial margining.

Q.3517 Which of the following best describes a forward commitment?

A. A forward commitment is a legally binding promise to perform some action in the future.

B. A forward commitment is a claim (to a payoff) that depends on a particular event.

C. A forward commitment is a contingent claim that depends on a stock price at some future date.

D. A forward commitment is a derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments.

Q.3519 Chris Dunkins bought a put option with a strike of $59. If at expiration the stock is now worth $42, then what is the payoff of the option at expiration?

A. $0 payoff.

B. $17 positive payoff.

C. $17 negative payoff.

D. None of the above.

Q.3520 Which of the following statements is correct regarding the value of a forward contract to a short party at expiration?
The value of the forward contract is:

A. Valueless.

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.

D. Equal to 1 divided by the value of the long party.

Q.3521 Which of the following is *NOT* an exchange-traded derivative instrument?

A. Futures.

B. Forwards.

C. Options.

D. None of the above.

Q.3522 Which of the following factors differentiates futures contracts from forward contracts?

A. Futures contracts are cash-settled contracts.

B. The value of a futures contract is derived from its underlying asset.

C. Forward contracts require physical assets for settlement, not cash.

D. Futures contracts trade on regulated markets.

Q.3523 In order to protect from the downside risk of stock prices, investors should:

A. Buy put options.

B. Sell put options.

C. Buy call options.

D. Sell call options.

Reading 29: Exchanges and OTC Markets

Q.824 John Galloway has recently joined Ace Investments as an investment manager. He previously worked as an equity trader at a small brokerage firm. His new boss told him that he would only be trading derivatives on exchanges, and the firm does not approve the use of over-the-counter derivatives.
Which of the following derivative instruments is he NOT allowed to trade?

I. Forwards
II. Options
III. Swaps

A. II only

B. I only

C. II and III

D. I and III

Q.825 Diya Singh is a junior trader at Mumbai Balance Fund. She invests in derivatives with the purpose of speculating on derivatives prices and the price trends of the underlying assets. Unlike hedgers who trade long-dated customized derivatives, Singh intends to invest in more liquid and more standardized derivative instruments. She has the option to invest in either exchanges or over-the-counter markets. Considering her purpose, which of the following markets is more suitable for Singh?

A. Over-the-counter markets.

B. Centralized exchanges.

C. Both over-the-counter markets and centralized exchanges.

D. None of the markets are suitable.

Q.826 Muhammad Amir recently completed his Ph.D. in finance and economics. After his graduation, he started his career as a college professor. In his first lecture, he said: "Exchanges are more efficient and more liquid than OTC markets as they minimize the risk and promote customization." Which of the following options is correct?

A. Muhammad Amir is incorrect regarding the liquidity feature of exchanges.

B. Muhammad Amir is incorrect regarding the enhanced efficiency of exchanges.

C. Muhammad Amir is incorrect regarding the promoted customization of exchanges.

D. Muhammad Amir is incorrect regarding the risk reduction of exchanges.

Q.827 Exchanges perform a number of functions to enhance efficiency and promote the integrity of financial markets. Which of the following functions is least likely performed by the exchanges?

A. Exchange constructs contracts that are standardized in terms of maturity dates, minimum price quotation increments, deliverable grade of the underlying assets, delivery location of the contract, etc.

B. Exchange provides a central venue for trading and hedging. This centralized trading venue enhances efficiency and promotes an opportunity for price discovery.

C. Exchange provides a platform for hedgers and arbitrageurs to construct products and transactions that fulfill their purposes.

D. Exchange provides reporting services related to transaction prices and volumes to trading participants, data vendors, and subscribers, which improves price transparency.

Q.828 Frau Schulz is the head of risk management at Frankfurt Money Bank. Her job is to understand the risk structure of a transaction and the risk of the market in which the transaction is carried out. She suggests that it is better to trade in exchanges than it is to trade in over-the-counter markets for the following reasons:

I. One reason for trading in exchange is the central clearing feature of exchange that allows the netting of all the outstanding trades of a specific party

II. Another reason for trading in exchanges is because it reduces counterparty risk and systemic risk

Which of the above-mentioned reasons for trading in exchanges rather than in OTC markets is/are incorrect?

A. Only I is incorrect

B. Only II is incorrect

C. Both reasons are incorrect

D. Both reasons are correct

Q.829 The majority of the derivative transactions are a zero-sum game. Therefore, the party with the loss is less likely to pay for its losses or fulfill its obligations. To mitigate such situations, exchanges have developed netting and margining methods. Identify if the given definitions of margining and netting are correct.

I. Netting is referred to as the offsetting of contracts that reduce the exposure or risk of counterparties related to the open positions to which they are exposed. It also reduces the costs of maintaining open positions as the parties will be required to only post margins against net positions.

II. Margining is divided into two types - the variation margin, and the initial margin. In the variation margin account, members receive and pay cash or other assets against gains or losses in their positions.

III. In the initial margin account, members provide coverage against losses in case they default on their contracts.

A. Only statement I is correct.

B. Only statement II is correct.

C. Only statements II and III are correct.

D. All of the statements are correct.

Q.832 Mathew Perry, an investment analyst, is reading a research paper based on the evolution of exchanges. He finds out that, before the introduction of clearinghouses, many other clearing and netting alternatives existed in exchanges to net the positions of members in order to reduce the risks. Which of the following clearing or netting type is most common nowadays in exchanges?

A. Bilateral clearing

B. Central clearing

C. All of the above

D. None of the above

Q.833 Which of the following statements are consistent with the differences between OTC markets and exchange markets?
I. The members of OTC markets are in better positions to negotiate the terms of a contract such as maturity, grade of the underlying assets, delivery terms, etc., than the members of exchange markets
II. It is riskier to trade in exchanges as all the trades are cleared through only one counterparty and the default of this party can have an effect on all the parties

A. Statement I is consistent with the differences between OTC markets and exchange markets.

B. Statement II is consistent with the differences between OTC markets and exchange markets.

C. Both statements are consistent with the differences between OTC markets and exchange markets.

D. None of the statements are consistent with the differences between OTC markets and exchange markets.

Q.834 Ellen Fraser, FRM, has recently joined Galactic Investment Bank as an investment manager. Fraser's first assignment at her new job is to hedge a client's portfolio against the movements in interest rates. Her supervisor instructed her to hedge the portfolio with exposure in the derivatives market while taking basis risk into considerations. Fraser has the option to invest in either over-the-counter derivatives or exchange-traded derivatives. Which derivatives are LEAST likely exposed to basis risk?

A. Over-the-counter derivatives are least likely exposed to basis risk.

B. Exchange-traded derivatives are least likely exposed to basis risk.

C. Both over-the-counter and exchange-traded derivatives are exposed to basis risk.

D. Neither over-the-counter nor exchange-traded derivatives are exposed to basis risk.

Q.835 Which of the following is not true regarding over-the-counter derivatives?

A. OTC derivatives are more flexible as they enable market participants to negotiate the terms of the agreement.

B. In order to unwind an OTC derivatives transaction, a member must interact with the original counterparty.

C. OTC derivatives are more efficient as they help reduce the credit risk or the systemic risk of the transaction.

D. OTC derivatives reduce basis risk, as there are no standardized contracts in OTC derivatives markets.

Q.836 Guanting Chen is participating in an aptitude test to enter into the summer analyst program of the Great Britain Investment Bank (GBIB). The aptitude test was divided into three portions, including business ethics, asset valuation, and derivatives. One of the questions in the derivatives portion asked to note down four categories of over-the-counter derivatives.
Which of the derivative categories mentioned by Chen is NOT a type of OTC derivative?

A. Interest rate derivatives

B. Exchange rate derivatives

C. Credit derivatives

D. Arbitrage derivatives

Q.837 Which of the following is the accurate difference between the clearing process and the settlement process of over-the-counter derivatives?

A. The settlement of OTC derivatives is the process by which payment obligations between two or more parties are computed and netted, and clearing is the process by which the contract obligations are fulfilled.

B. The clearing process of OTC derivatives is the process by which payment obligations between two or more parties are computed and netted, and the settlement is the process by which the contract obligations are fulfilled.

C. The clearing process of OTC derivatives is the process by which members are required to post cash and assets against their open positions, and the settlement is the process by which the contract obligations are fulfilled.

D. The clearing process of OTC derivatives is the process by which payment obligations between two or more parties are computed and netted, and the settlement is the process by which the contract cleared through the central clearinghouse.

Q.838 Margining is a method of creating a layer of security or resources to cover the losses incurred during the period of a contract. In other words, margining is a process that requires members to receive and pay cash or other assets against gains and losses in their positions, which provides coverage against losses in case of default. In which of the following markets is margining used?

A. Over-the-counter markets.

B. Exchanges.

C. Both over-the-counter and exchange markets.

D. None of the above.

Q.840 Clearing houses are

A. never used in futures markets but are sometimes used in OTC markets.

B. always used in futures markets and sometimes used in OTC markets.

C. always used in both futures markets and OTC markets.

D. always used in OTC markets but never used in futures markets.

Q.841 Derivative Product Companies or DPCs are typically triple-A rated independently capitalized entities created by one or more banks as a bankruptcy-remote subsidiary of a major dealer. The purpose of DPCs is to provide external counterparties with a degree of protection against counterparty risk by protecting against the default of the parent bank or parent company. Which of the following is least likely a determinant of DPCs' triple-A ratings?

A. The ability to mutualise the default loss amongst other counterparties and another market participant.

B. The support from the parent company and the transferability of the risk to the well-capitalized firm in case the parent company defaults.

C. The capability of credit risk management, and providing operation guidelines to external counterparties to control credit quality.

D. The ability of the DPC to minimize market risk.

Q.842 Which of the following correctly defines monolines?

A. Monolines are legal entities created to isolate the default risk of the counterparty in a derivatives transaction, so the firm can receive the full settlement of its other transactions.

B. Monolines are triple-A rated independently capitalized entities created by one or more banks as a bankruptcy-remote subsidiary.

C. Monolines are dependent central parties in the derivatives market that act as the counterparty in every derivative transaction.

D. Monolines are types of insurance companies with strong credit ratings that provide credit wraps and credit default swaps to achieve diversification and better returns.

Q.843 Which of the following is a method of risk mitigation in over-the-counter markets where a firm creates a legal entity to transfer its assets and to isolate the firm's financial risk?

A. Central counterparty

B. Initial Margins

C. Derivative Product Company

D. Special purpose vehicles

Q.3571 Financial intermediaries securitize assets by creating Special Purpose Vehicles (SPVs) because:

A. It increases the overall return

B. It protects the SPV in case the financial intermediary goes bankrupt

C. All of the above

D. None of the above

Q.3572 What is the definition of a Special Purpose Vehicle (SPV)?

A. A subsidiary company with an asset/liability structure and legal status that makes its obligations secure even if the parent company goes bankrupt

B. A type of asset-backed security that is secured by a mortgage or collection of mortgages

C. A structured financial product that pools together cash flow-generating assets and repackages this asset pool into discrete tranches that can be sold to investors

D. An institution providing a wide variety of deposit, lending and investment products to individuals, businesses or both.

Q.4874 Which of the following is a way in which CCPs handle credit risk?

A. Variation Margin and Daily Settlement

B. Netting

C. Default Fund Contributions

D. All of the above

Q.4875 In a lecture, when an FRM candidate is asked to give the advantages of OTC markets over exchanges, he says the following:

I. The participants have the freedom to negotiate deals
II. There's better information flow between a market maker and the customer
III. There are fewer restrictions and regulations on trades

Which of the above statement(s) is/are the correct advantages of OTC markets?

A. III only

B. I & II only

C. All of the above

D. None of the above

Q.4876 Which of the following factors are likely to affect the initial margin for a futures contract set by a CCP?

A. Volatility of the futures prices.

B. The time taken by the exchange to close out a member in case of a default.

C. All of the above.

D. None of the above.

Q.4877 The following are funds available to a CCP to help cover for losses that may arise if a member default:

I. Default fund contribution made by the member
II. Initial margin paid by the member
III. Equity capital provided by the exchange
IV. Default fund contributions made by other members

Which of the following is the correct order in which the funds are used?

A. I, II, III, and IV

B. II, I, IV, and III

C. I, II, IV, and III

D. IV, III, I, and II

Q.4878 Assume that, before the existence of CCPs, Trader X agreed to buy 10,000 bushels of wheat for 400 cents per bushel from Trader Y for delivery in June. Three weeks later, Trader X sold 5,000 bushels of wheat to Trader Z for 420 cents per bushel for delivery in June and another 5,000 bushels to Trader Q for 440 cents per bushel of wheat for delivery in June. What is the expected profit or loss for Trader X?

A. A profit of USD 4,000

B. A loss of USD 3,000

C. A profit of USD 3,000

D. A loss of USD 2,000

Q.4879 A trader agrees with a broker to enter into a futures contract to sell 4,000 bushels of wheat for 500 cents per bushel. The initial margin is USD 20,000, and the maintenance margin is USD 10,000. Which circumstances will lead to withdrawal of USD 400 from the margin account?

A. If price rise by 10 cents.

B. If price drops by 10 cents.

C. If price drops by 13 cents.

D. If price rises by 13 cents.

Q.4880 All of the following parties are required to post margin by the Chicago Board Options Exchange EXCEPT:

A. A trader with a net long position in a call option.

B. A trader with a net short position in a put option.

C. A trader with a net short position in a call option.

D. A trader shorting a stock.

Q.4882 1,000 shares are sold by a trader at a price of $45 per share. The initial margin and maintenance margin are 140% and 115%. What is the initial margin required?

A. $63,000

B. $51,750

C. $45,000

D. $18,000

Q.5039 You sell one December Brent Crude Oil futures contract when the futures price is $108 per gallon. Each contract is on 1,000 gallons, and the initial margin per contract that you provide is $6,000. The maintenance margin per contract is $3,000. During the next day, the futures price rises to $109.5 per gallon. What is the balance of your margin account at the end of the day?

A. $1,500

B. $7,500

C. $4,500

D. $9,000

Q.5040 A company (systemically important non-financial institution) entered into derivatives agreements with Banks X, Y, and Z that are worth +$50 million, -$60 million, and -$25 million to the company, respectively. All transactions are cleared centrally through the same CCP, and the CCP requires a total initial margin of $50 million. How much margin does the company have to provide?

A. $85 million

B. $50 million

C. $0

D. $35 million

Reading 30: Central Clearing

Q.844 Frank Oliver is the head of the derivatives trading unit of an investment company. Apart from looking after derivative investments, his job description also includes the supervision of a dozen derivatives traders. In a post-market review session, Oliver made the following points regarding the cycle of a derivatives trade:
I. The first stage is the execution, in which parties agree to the legal obligation of buying or selling the underlying against a cash flow determined by a variable
II. The second stage is the clearing stage, where the underlying securities and cash is exchanged
III. The third stage is the settlement, where the margins are maintained trade is settled, and the obligation of the contract is fulfilled

Determine if Oliver's comments are accurate.

A. He is only correct regarding the first stage of the derivatives trade cycle.

B. He is only correct regarding the second stage of the derivatives trade cycle.

C. He is only correct regarding the third stage of the derivatives trade cycle.

D. He is correct regarding all stages of the derivatives trade cycle.

Q.845 Unlike traditional investments where the transaction takes place in two stages, derivatives transactions are carried out in multiple stages. In which of the following stages of a derivatives trade is the central counterparty most likely involved?

A. Execution stage

B. Clearing stage

C. Settlement stage

D. None of the above

Q.846 Isabell Engler is a finance journalist who is currently working on a research paper focused on the difference between the goals of central counterparties in over-the-counter markets and in exchanges. She made the following statements in this regard:

I. One main goal of the central counterparty (CCP) is to standardize and enhance the operational process

II. On the other hand, another goal of the central counterparty (CCP) in over-the-counter markets is to mitigate counterparty risk and maintain liquidity

Which of her statements is/are correct?

A. Only statement I is correct.

B. Only statement II is correct.

C. Both statements are correct.

D. None of the statements is correct.

Q.847 The introduction of central counterparties (CCP) changed the way the market participants are interrelated in the financial system by making itself the center point in the transactions. Determine the two accurate benefits of CCPs in relation to the topology of financial markets.

A. Increased interconnectedness and decrease risk.

B. Increased interconnectedness and increased transparency.

C. Decreased interconnectedness and increased transparency.

D. None of the above.

Q.848 Which of the following is the appropriate definition of the novation function of the CCP?

A. Novation is the act of replacing one party in a contract with another, or of replacing one debt or obligation with another. It extinguishes (cancels) the original contract and replaces it with another, and requires the consent of all parties involved.

B. Novation is the act of replacing one party in a contract with another, or of replacing one debt or obligation with another. It extinguishes (cancels) the original contract and replaces it with another, and does not require the consent of all parties involved.

C. Novation enforces that no party is allowed to replace a contract with another, or of replacing one debt or obligation with another.

D. None of the above.

Q.849 Margins are usually of two types – initial margins and variation margins. Both required margins are calculated based on different variables. Which of the following is the determinant of the initial margin?

A. Ratings of the borrower.

B. Risk of the transaction.

C. The creditworthiness of the borrower.

D. Discretion of the parties involved.

Q.850 Identify if the given definitions of margins are correct.
I. The variation margin is referred to as the offsetting of contracts that reduce the exposure or risk of counterparties related to the open positions to which they are exposed.
II. The initial margin is the initial amount required from members at the inception of the trade; it provides coverage against the losses in case one member defaults.

A. Only definition I is correct.

B. Only definition II is correct.

C. Both definitions are correct.

D. None of the definitions are correct.

Q.851 Infrastructure Bank of Congo has a long exposure of $350 million in a derivatives contract on the Frankfurt futures exchange. Since elections recently took place in Congo and the newly elected government canceled the projects of its predecessor, the nation's bank is likely to default on its obligations. Which of the following is the first alternative a central counterparty (CCP) will apply after default?

A. Increasing the variation margin.

B. Auctioning the contract of the defaulting party.

C. Requiring additional initial margin.

D. Loss mutualizing.

Q.852 The central counterparty (CCP) is the center point in the exchanges. It is the counterparty of all the parties or members having exposure in the exchange. Suppose that one of the members is unable to fulfill its obligation and defaults. The CCP will terminate all financial contracts and relations with the defaulting party. The CCP has to manage ways to go about such defaults. Which of the following has the least adverse consequences on the other members if a member defaults?

A. Let the defaulting member absorb the losses.

B. Let the CCP pay for the losses.

C. Let the CCP replace the defaulting member through auction.

D. Let the CCP distribute loss through loss mutualisation.

Q.854 Mitigating the counterparty risk is essential to maintain liquidity and reduce systematic risk in the financial system. As an insurance against the counterparty default, all the central counterparty (CCP) members contribute specific resources to a pool that is used if the resources of the defaulting counterparty are insufficient to pay off the losses. In which of the following processes do members contribute to this type of insurance to absorb the adverse consequences of a defaulting counterparty?

A. Novation

B. Auction

C. Loss mutualization

D. Multilateral netting

Q.855 Which of the following is NOT a criterion for a contract/product that can be cleared in exchanges through CCPs?

A. More standardized

B. Less complex

C. More liquid

D. More creditworthy

Q.856 Angela Oliver has recently joined a fast-growing brokerage house based in New York, which is also a member of a central counterparty (CCP). Which of the following is not a criterion for becoming a CCP member?

A. Should meet admission criteria like ratings.

B. Financial commitment through contribution to the default fund.

C. Should be able to conduct the novation process.

D. Should be able to fulfill operation requirements like posting margins.

Q.857 Adam Eger, an equity analyst, is one of the members of a panel of guests invited to discuss the subject of the efficiency of exchange markets. While the panel supports the argument that there should be a single global central counterparty that can increase standardization globally and reduce counterparty risk, Eger is opposed to it. He believes that there should be more than one central counterparty due to the following factors:
I. Geographical markets intend to have their own 'local' CCPs to clear the transactions of regional financial institutions denominated in their local currency.
II. Regional CCPs specialize in certain products like credit default swaps, FRAs, etc. One single CCP is not sufficient to specialize in every clearable product.

Which of the above mentioned is/are likely to support the argument of multiple CCPs?

A. Only factor I supports the argument of multiple CCPs.

B. Only factor II supports the argument of multiple CCPs.

C. Both factors support the argument of multiple CCPs.

D. None of the factors support the argument of multiple CCPs.

Q.858 Lindy Sago is a project manager at Toronto Fast Brokers Inc. The firm acts as a non-clearing member in the derivatives exchange market it trades in, but the firm’s management recently decided to become a clearing member of the exchange. The firm has assigned Sago the task to evaluate the revenue model of the central counterparty (CCP). Which of the following is the appropriate combination of a CCP’s revenue?

A. Trading spreads and initial margins.

B. Trading spreads and interest on the margins.

C. Fees on clearing trades and interest on the margins.

D. Fees on clearing trades and initial margins.

Q.859 Susanne Lange is an investment manager at London Wharf Bank. The firm acts as a non-clearing member in the derivatives exchange market it trades in, but recently the firm has decided to become a clearing member of the exchange. To brief the team about the new direction of the firm, Lange has prepared the following general points related to CCPs:
I. The central counterparty does not make counterparty risk disappear, rather it centralize risk and converts counterparty risk into different forms of financial risk
II. Unlike other financial institutions, the central counterparty cannot fail
III. The margining activity of the central counterparty decreases risk, but in some cases, it can also increase risk

Which of the above-mentioned statements is/are correct?

A. Points I and II are correct.

B. Points II and III are correct.

C. Points I and III are correct.

D. Points I, II, and III are correct.

Q.860 A number of differences exist between CCPs and OTC CCPs. Because of these differences, CCP markets are considered less risky than OTC CCP markets. Which of the following is **not** an appropriate similarity between OTC CCP markets and CCP markets?

A. In both, contracts last for the same period of time.

B. In both, there is posting of initial and variation margins.

C. In both markets, transactions are standardized.

D. Default fund contribution applies in both markets.

Q.861 Mohan Singh is an investment manager at Platonic Investments that has been investing in OTC derivatives for the past 10 years. This year, the manager has proposed to buy contracts into central counterparty (CCP) cleared markets as they tend to be more efficient. If Singh included the following advantages of central counterparty (CCP) cleared markets in his proposal, identify which of the following advantages he incorrectly presented in his proposal.

A. The centralized position of the CCP enables it to understand the positions and exposures of its market participants, which increases the transparency in the market.

B. The CCP's functions like margining, netting, and settlement potentially increases operational efficiency and reduces costs.

C. The central auction feature of CCP may transform the large default of a clearing member into smaller price disruptions through coordinated replacement of positions during a crisis.

D. The function of frequently requiring greater margin requirements under a CCP may increase the procyclicality in the economy.

Q.862 Which of the following is NOT a disadvantage of central counterparty (CCP) cleared markets?

A. Moral hazard has a serious effect on the counterparty risk management practices of the market participant as they believe that, in the presence of the CCP, they do not have to take risk into consideration.

B. The function of frequently requiring greater margin requirements under a CCP may increase the procyclicality in the economy.

C. When the losses of the defaulting counterparties exceed the financial commitments from the defaulter, then these losses are distributed throughout the CCP members.

D. The central counterparty is vulnerable to adverse selection, which means that since the members trading OTC derivatives know more about the risks than the CCP itself, the members may intentionally pass the toxic contracts or assets to the CCP.

Q.863 Ben Owen is a final-year student in a post-graduate program in the field of investing and hedging at the University of Zurich. Owen is writing a thesis on the subject of the risk-mitigating abilities of central counterparties. After reading a great amount of literature on the subject, he has concluded that the properties of CCPs are as follows:
I. The counterparty risk does not disappear from the system but is transferred from one party to the CPPs
II. CCPs are also vulnerable to failure
III. When CCPs increase the initial margin requirements in adverse economic times, the liquidity of financial institutions with liquidity shortages is likely to worsen.

Which of the properties of CCPs analyzed by Owen is correct?

A. Properties I and II are correct.

B. Properties II and III are correct.

C. Properties I and III are correct.

D. Properties I, II, and III are correct.

Q.864 Tara Denis is the spokesperson for a central counterparty in one of the largest operating futures markets in Japan. During a Q&A session, one of the members of the public commented that the presence of CCPs in exchanges and OTC markets is creating a moral hazard. Which of the following is the most appropriate reference of the moral hazard pointed out by the member of the public?

A. It is the moral hazard related to the standardization of products by the CCP. As the CCP standardizes all the products, the market participants use more and more alternative products that do not capture the true motive of the hedge.

B. It is the moral hazard related to the effect of disincentivizing counterparty risk management practices by CCP members. Since the CCP acts as the counterparty to the transaction, the party or institution invests little resources in monitoring others parties' credit quality.

C. It is the moral hazard related to the reduction in counterparty risk. Since the CCP assumes all the counterparty risk, it becomes cheaper for parties to enter into the contracts, which is unnecessary for them.

D. It is a moral hazard related to the creation of liquidity. As the CCP creates and maintains liquidity in financial markets through margining, more and more participants enter the market with the intention of speculating.

Q.865 For a CCP to clear a product, some conditions MUST be satisfied. Which of the following is not one of those conditions?

A. The legal and economic terms of the product must be stan¬dard within the market.

B. There should be extensive historical data on the product price should be available

C. There needs to be generally accepted models for valuing the products.

D. The product needs to be passively traded.

Q.866 The main goal of the central counterparty (CCP) is to reduce the counterparty risk or default risk by acting as a central counterparty to every buyer and seller. However, apart from the risk related to the default of the clearing member, this centralization creates other risks. Which of the following risks is NOT likely a risk that the CCP faces?

A. Distress of other clearing members.

B. Failed auction.

C. Resignation of employees.

D. Reputational risk.

Q.868 Edward Trott is a renowned anchor at a local business news channel. During a panel discussion in an evening news bulletin, he mentioned that central counterparties (CCPs) themselves are vulnerable to risks. One of the major risks faced by CCPs arises if the CCP does not receive reasonable economic bids for the contracts defaulted by clearing members. It then has to impose the significant losses of that member on another clearing member via loss allocation methods, which may result in financial distress and potential further defaults. Which of the following risks is the anchor referring to?

A. Distress of other clearing members.

B. Failed auction.

C. Resignation of clearing members.

D. Reputational risk.

Q.869 A case study in a financial investments analysis exam stated that central counterparties (CCP) are faced with many risks. These risks can be default-related or non-default-related. From the following, identify the least likely default-related risk faced by CCPs.

A. Failed auction.

B. Investment losses.

C. Resignation of clearing members.

D. Reputational risk.

Q.870 A postgraduate finance student of Dornbusch University has based his thesis on the subject of the risks faced by central counterparties. The student has categorized the risks faced by central counterparties in two categories i.e., default risks and non-default risks. This categorization is consistent with the risk classifications provided in the FRM books. Which of the following types of risk is a type of non-default risk?

A. Failed auctions.

B. Resignation of clearing members.

C. Frauds.

D. Reputational risk.

Q.871 Unlike in exchanges, the central counterparties of over-the-counter markets have to deal with complex transactions and projects. These CCPs are exposed to the risk of inconsistency in their margining functions. This is because the margin requirements of OTC products cannot be derived from market sources directly, but they require complex models to carry out the mark-to-market activities. This risk is most likely associated with:

A. Distress risk

B. Operational risk

C. Legal risk

D. Model risk

Q.873 Which of the following model risks or model problems arise in the model-based initial margin estimation?

A. In the model-based initial margin estimation, the defaulting party is unidentified until he defaults on its obligations in the contract.

B. In the model-based initial margin estimation, the loss incurred due to the default of a member is allocated to the other clearing members.

C. In the model-based initial margin estimation, the initial margins are estimated at a fixed dollar amount margin requirement set by the central counterparty (CCP).

D. In the model-based initial margin estimation, the initial margins increase in proportion to the size of the position without considering that the risk of a large and concentrated position is adequately covered.

Q.874 The central counterparties are not only exposed to default risks and operational risks but they are also exposed to liquidity risks. Which of the following functions of CCPs can possibly increase the liquidity risk of the CCPs?

A. Large amount of cash that flows through the central counterparties (CCPs) due to variation margin payments.

B. Large amount of cash that flows through the central counterparties (CCPs) due to initial margin requirements.

C. Large amount of default losses that are mutualized after a clearing member of CCPs has defaulted.

D. Large amount of cash that disappears from central counterparties (CCPs) when one clearing member has a negative balance position.

Q.875 When trading standard transactions with an end user, a dealer is more likely to insist that the transactions are cleared through a CCP even when the credit quality of the end user is low. This is termed as:

A. Moral hazard

B. Adverse selection

C. A tear up

D. A pro-cyclical

Q.876 The centralization feature of the central counterparty (CCP) increases the efficiency but at the same time also increases the operational risks for its members due to the concentration of the whole risk on the CCP. Which of the following situations can give rise to operational risk?

A. Default by a clearing member.

B. Increase in margin requirements.

C. Failed auction.

D. Infrastructure breakdown.

Q.877 Which of the following is the most accurate explanation of the sovereign risk faced by the central counterparty (CCP)?

A. The sovereign risk faced by the CCP is referred to as the intervention of sovereign governments in operation and activities of the CCP.

B. The sovereign risk faced by the CCP is due to the failure of members who have held sovereign bonds as margin, which may have declined in value due to sovereign failure.

C. The sovereign risk faced by the CCP is referred to as the pressure and the undue influence that can arise when one of the members of the CCP is the agency of a sovereign fund/government.

D. None of the above.

Q.878 The central counterparty (CCP) acquires banks services for the receipt and transfer of funds to and from its clearing members due to changes in variation margins and initial margins. These banks or large financial institutions can face technical failures or human failures that could stop them from processing the CCP's instructions to make cash payments and receive or deliver securities to its members. This could create liquidity problems on the end of the CCP and the clearing members that still have to fulfill obligations. This risk is most likely associated with:

A. Sovereign risk

B. Custodian risk

C. Model risk

D. Investment risk

Q.1138 The default of a clearing member could create further problems, including:

A. Loss resulting from litigation.

B. Fraud.

C. Operational losses.

D. Default or distress among other CCP members.

Q.1139 Since CCPs handle large amounts of cash and securities, they could potentially suffer losses from non-default loss events. The following are good examples of such events except:

A. Business or operational failure.

B. Failure or insolvency of a custodian.

C. Investment losses.

D. Resignations.

Q.1140 One of the lessons learned from previous CCP failures is that:

A. Initial margin methodologies need not be updated when there's a major shift in market regime.

B. Initial margin methodologies need to be updated when there's a major shift in market regime.

C. Initial margin updates should be excessive.

D. CCP failures cannot be avoided.

Q.1141 Which of the following is the main source of liquidity risk in CCPs?

A. High transaction costs.

B. Varying margin payments.

C. Overinvestment in long-term assets.

D. High operating costs.

Q.1142 A potential mismatch between margin payments and cash flows in various currencies describes:

A. FX risk

B. Concentration risk

C. Sovereign risk

D. Custody risk

Reading 31: Futures Markets

Q.605 Jack Lee, a commodities investor at Singapore Investment Bank, instructs his team of traders to sell a September copper futures contract of 25,000 pounds in the COMEX (Commodities exchange, a sub-division of the NYMEX). Given these instructions, a bank's team of floor traders at the COMEX physically met the seller of the September Copper futures contract and determined the price of $0.05 (5 cents) per pound. Looking at the nature of the transaction, one can say that the contract is being traded on:

A. An over-the-counter market.

B. An open outcry exchange.

C. An electronic exchange.

D. None of the above.

Q.606 Matias, FRM, has recently joined the London office of Venture Financials as a junior derivatives trader. Currently, Matias has an open position of gold futures contracts on the London Exchange. According to the contract, Matias is obligated to sell 5,000 troy ounces of gold with delivery in April. Determine the appropriate position of Matias's trade.

A. Hedged futures position.

B. Short put option position.

C. Short futures position.

D. Short forwards position.

Q.607 Jack Manchester is a summer intern at one of the well-known investment banks in Canary Wharf. During lunch with his supervisor, Manchester was given a document pertaining to the futures contract's specifications. The excerpt from the document reads "… the tin must be a minimum of 99.85% purity conforming to BS EN 610:1996. All the tin deliverable against the London Metal Exchange (LME) contracts must be LME approved." This futures contract's specification is most likely related to:

A. Position limits.

B. Delivery arrangements.

C. Contract size.

D. Quality of the underlying.

Q.608 Nora Schneider is an experienced derivatives trader at a German commodities investing firm. Recently, she was given additional responsibilities to look after the trader's training department. While training the newly employed derivatives traders, she instructed the trader to clearly read the terms and specifications of a futures contract. Which of the following feature is NOT specified in the contract specification details of a futures contract?

A. Position limit.

B. Delivery month.

C. Price limits.

D. Counterparty.

Q.609 The Karachi Mercantile Exchange (KME) has set the daily price limit of rice futures contracts to Rs.4. The closing price of the rice futures contract on Monday was Rs.140 per 100 KG. If the evening newspaper on Wednesday reads that "Rice futures contracts closed limit down at Rs.138 per 100 KG," then which of the following is the most likely closing price of the rice futures contract on the preceding day?

A. Rs. 136 per 100/KG

B. Rs. 140 per 100/KG

C. Rs. 142 per 100/KG

D. None of the above

Q.610 Elif Makarov, a derivatives trader at one of the largest commodities trading firms in Moscow, is looking at a possible arbitrage trade in the copper futures contract. If the copper futures contract price is $47.6 and the spot price of copper is $48.9, then determine the appropriate strategy Makarov may take to earn the arbitrage profit.

A. Take a short position in the copper futures contract and buy copper at the spot price.

B. Take a long position in the copper futures contract and sell copper at the spot price.

C. Wait for copper futures contracts to converge to the spot price and then take a short position in futures contracts.

D. Wait for copper futures contracts to converge to the spot price and then take a long position in futures contracts.

Q.611 Adam Anderson is a junior officer in the settlement department of a derivatives investment firm. He also takes a keen interest in tweeting and blogging about derivatives education and strategies. In one of his latest blog articles, he made the following comments regarding operations on a margin account:

I. The initial margin refers to the amount that must be deposited to take a position in futures contracts

II. The variation margin refers to the minimum margin balance required to retain a position in the futures contract

III. Marking to market is the process of purchasing a particular asset or commodity and selling the futures contracts on that asset or commodity

Which of the comment is/are incorrect?

A. Comment I only

B. Comment III only

C. Comments I & II

D. Comments II & III

Q.615 Which of the following statements regarding futures transactions is/are incorrect?

I. Speculators are subject to lower margin requirements in futures contract trades as compared to hedgers.

II. In a spread transaction, the trader simultaneously takes a long position in futures on a specific asset for a specific delivery time and takes a short position in futures on the same asset for a different maturity or delivery time.

III. Futures contracts are settled on a daily basis, whereas forward contracts are settled at the maturity date.

A. Statement I only

B. Statement II only

C. Statements I & II

D. Statements II & III

Q.616 During the inauguration ceremony of a newly introduced electronic clearing system at the Istanbul Commodities Exchange, the general manager of the operations department emphasized the importance of clearinghouses in the exchange. He said the following:
"It is because of clearinghouses that the traders of futures markets are required to honor their contracts. The clearinghouses act as a counterparty to every buyer and seller, allowing traders to decrease the default risk of the counterparty. Because of clearinghouses, traders can reverse or close their positions without having to contact the counterparty."

The speech of the general manager at the inauguration ceremony is:

A. Incorrect because the traders of futures markets have the right, but not the obligation, to honor the contract.

B. Incorrect because the default risk pertaining to the counterparty exists in futures markets.

C. Incorrect because traders cannot reverse their positions at any given time until the maturity of the contract.

D. Appropriate.

Q.619 Alisha Gomez, head of the trading department, is interviewing with one of the potential candidates for a position as a junior trader in the derivatives units. Gomez asked the candidate to identify which of the following prices is used for calculating daily gains, losses, and margin requirements for the parties involved in the trading of futures contracts. Which of the following is the appropriate answer to Alisha Gomez's question?

A. Opening price.

B. High price.

C. Closing price.

D. Settlement price.

Q.620 Which of the following is NOT a method/process for terminating a position in a futures contract?

A. By delivering the underlying assets/goods of a futures contract.

B. By cash-settling in which futures are marked to market - based on the settlement price of the last trading day.

C. The investor can take a position that is opposite of his current position.

D. The investor can take the exact same position in the underlying asset as in the futures contract.

Q.621 Vikram Pandit, a derivatives investor from Mumbai, instructs his broker to terminate his short position in 10 futures contracts of live cattle at Chicago's futures exchange. The broker proposed to him four alternatives for terminating the contract. Which of the following is the most appropriate method?

A. Purchase cattle from Mumbai and physically deliver the cattle to the long party.

B. Take a new short position of the same size in a live cattle futures contract with a different delivery date.

C. Find a trader with a long position in live cattle and settle up between yourselves, off the floor of the exchange.

D. Take a long position of the same size in a live cattle futures contract with the same delivery date.

Q.624 Vanesa Fredrick is a senior derivatives investment manager at Unicorn Hedge Funds. While briefing a group of new employees in the accounting and finance unit of the fund, she made the following two statements related to the tax treatment of different parties:

Statement I: For corporations, all capital gains from futures contract are taxed at the same rate as their ordinary income, whereas capital losses from futures contracts are deductible only to the extent of capital gains. A corporate entity may carry forward the capital losses indefinitely.

Statement II: For non-corporate taxpayers, short-term capital gains from futures contracts are taxed at the ordinary income tax rate, but long-term (contracts held for more than a year) capital gains are taxed at the capital gains tax rate of 15-20% maximum. Capital losses for non-corporate taxpayers are non-tax deductible.

Which of the following is correct?

A. Only statement I is correct.

B. Only statement II is correct.

C. Both statements are correct.

D. Both statements are incorrect.

Reading 32: Using Futures for Hedging

Q.625 A Canadian importer has ordered $1,000,000 US worth of oil drilling equipment to be delivered in six months. The current spot exchange rate is 1.3 CAD per 1.00 USD. However, the importer fears that the Canadian dollar will depreciate to 1.35 CAD per 1.00 USD in the next 6 months. As a result, the importer enters a forward contract to purchase $1,000,000 at a forward rate of 1.32 CAD per 1.00 USD. If the Canadian dollar depreciates to $1.35 CAD per 1.00 USD as predicted, what is the savings to the importer from his dealings in the forward market?

A. $350,000 CAD

B. $30,000 CAD

C. $50,000 CAD

D. $20,000 CAD

Q.627 Colin Thomson, the risk manager of a tire manufacturing company, suggests that the company should focus its resources on its core business activities rather than investing resources in hedging the risks faced by the company. He further added that the shareholders have as much information as the management of the company. Therefore, shareholders can easily hedge the risks. Lastly, he argued that the shareholders hedge the company's stocks in much smaller quantities. Hence, it is cheaper for the shareholders to hedge the risk as compared to the company. Which of the following options is correct?

A. Thomson's argument related to the availability of the company's information to the shareholders is incorrect. However, the argument related to the smaller costs incurred by shareholders for hedging risks is correct.

B. Thomson's argument related to the availability of the company's information to the shareholders is correct. However, the argument related to the smaller costs incurred by shareholders for hedging risks is incorrect.

C. Both arguments are correct.

D. None of Thomson's arguments are correct.

Q.628 The island of Godiva is a small hypothetical country in the Gulf of Mexico. Godiva has its own financial system, economic system, and laws. The only agricultural product of Godiva is rice, which is why the government sets weekly rice prices. The retailers of rice are only allowed to keep a maximum of 10% profit margin on rice sales. Coral Traders and Reef Enterprises are the two main retailers on the island. Coral does not hedge against the risk of changes in the price of rice, while Reef hedges the risk of an increase in prices by taking a long position in rice futures in a local futures exchange. Which of the following statements is correct?

A. Coral Traders should have smoother profit margins than Reef Enterprises.

B. Reef Enterprises should have smoother profit margins Coral Traders.

C. Both companies will have the same profit margins.

D. None of the companies have smooth profit margins.

Q.629 A risk analyst at a mid-sized alternative investment firm is responsible for hedging the company's multiple exposures to alternative assets. Suppose that the analyst has taken two positions, a long and a short in oil futures to hedge the risk of fluctuation in oil prices. If the basis of the hedge strengthens, then which of the following is true?

A. If the basis of the hedge strengthens, the short positions of the firm will improve.

B. If the basis of the hedge strengthens, the long positions of the firm will improve.

C. If the basis of the hedge strengthens, the short positions of the firm will worsen.

D. If the basis of the hedge strengthens, both the firm's positions will improve.

Q.630 Melanie Angebote is an instructor at a private business school in Vienna. She has recently begun teaching derivatives to undergraduate business management students. In one of her lectures, she asked the students to define their understanding of the strengthening and weakening of the basis of a hedge. Which of the following student comments is/are correct?
I. If the spot price increases relative to the futures price throughout the hedging period, the basis is strengthening.
II. Basis risk is the risk that the volatility of a futures contract will not move in line with that of the underlying exposure.

A. Only comment I is correct.

B. Only comment II is correct.

C. Both comments are correct.

D. None of the comments are correct.

Q.631 Togo Barrio, a portfolio manager at Mexico Asset Management Inc., is interviewing Linda Farris for the position of risk analyst in the firm's derivatives unit. To one of Barrio's questions related to the basis risk involved in hedging with futures contracts, Farris replied with the following three factors that affect the basis risk:
I. Interruption in the convergence of the futures prices and spot prices
II. Changes in the component of costs involved in hedging transactions
III. A mismatch between the maturity of the cash asset and the hedged asset

Which of the factors provided by Linda affect the basis risk?

A. Reason I only.

B. Reasons II and III.

C. Reasons I and III.

D. Reasons I, II, and III.

Q.632 Asim Hussain has recently joined the commodities trading desk of an investment bank in London. He is a hedger-trader who takes positions in futures contracts to earn profit from the difference in the spot price and futures price of a contract. He hedges the bank's exposure and also hedges on behalf of the bank's clients. One of the bank's clients knows they will need to buy oil at some time in March and believes the oil prices could fluctuate heavily by that time. Therefore, he instructs Hussain to come up with a strategy to hedge oil with expiration in March.
Hussain knows that the delivery months of oil futures contracts are March, June, September, and December. Which of the following contracts is most suitable for the hedge that expires in March?

A. Oil futures contracts with the delivery month of March.

B. Oil futures contracts with the delivery month of June.

C. Oil futures contracts with the delivery month of September.

D. Oil futures contracts with the delivery month of December.

Q.633 Futures contracts on jet fuel have maturity months in March, May, July, September, and December. An airline is hedging a purchase of 1 million barrels of fuel to be made on June 15 of this year. Which futures contract should it use?

A. The July contract.

B. The March contract.

C. The December contract.

D. The May contract.

Q.634 A German electronic appliances manufacturer expects to receive 30 million Turkish Liras at the end of March. The Lira futures contracts on the Eurex Exchange are available for the delivery months of March, June, September, and December. The size of one contract is 10 million Turkish Liras. The company shorts three June contracts on February 1 with the futures price of 0.6500 cents per Lira. If the futures prices and spot price on the closing date are 0.6250 and 0.6150, respectively, then calculate the effective price received in Euros for 30 million Liras.

A. The effective price is Euro 10,500.

B. The effective price is Euro 192,000.

C. The effective price is Euro 187,500.

D. The effective price is Euro 184,500.

Q.635 Emanuel is a junior trader working in the derivatives and hedging unit of a brokerage firm. Emanuel's superior instructed him to take a hedged position for one of its clients who wants to hedge its exposure in 10 million tons of plastic. Since the underlying asset is plastic and difficult to find futures contracts with the underlying asset of plastic, the trader is advised to take a position in rubber futures contracts. The contract size of rubber is 45 tons. If the standard deviation of the spot prices of plastic is 0.019, the standard deviation of the futures prices of rubber is 0.032, and the correlation coefficient between the two is 0.87, then determine what should be the optimal hedge ratio.

A. 0.52

B. 0.59

C. 1.46

D. 1.68

Q.637 Melanie Gomez is a former trader and the anchor of a local business TV channel. She is famous for her analysis and forecasts of commodities prices. She also presents a weekly education program to educate beginner traders on complex derivatives instruments and hedging strategies. She made the following definitions of some jargons used for hedging in her TV program:
I. Cross hedging occurs when two offsetting positions are opened in futures contracts with identical underlying assets.
II. Tailing the hedge is a process of calculating the correlation between percentage one-day changes on the futures and spot prices to estimate the number of contracts needed to hedge over the next day.

Which of the following is correct?

A. Statement I is correct while statement II is incorrect.

B. Statement I is incorrect while statement II is correct.

C. Statement I is correct and statement II is also correct.

D. Statement I is incorrect and statement II is also incorrect.

Q.638 A portfolio manager has constructed a portfolio that perfectly mirrors the NASDAQ-100 index. The portfolio manager is worried about the changes in the portfolio's value, so he decides to hedge the portfolio using futures contracts on the mini NASDAQ-100 index. If the portfolio's value is $16,165,000, the index futures price is 5,056 with each contract on $20 times the index, then estimate the number of contracts required to hedge the portfolio.

A. 138

B. 142

C. 160

D. 101120

Q.639 Julia Lange, an investment manager, has constructed a portfolio that somewhat mirrors the S&P 500 index. The investment manager intends to hedge the portfolio by taking a short position in S&P 500 futures. The current worth of the portfolio is $672,000,000, and the S&P 500 index futures price is 2,906, with each contract on $250 times the index. If the portfolio's beta is 0.78, then estimate the number of contracts Lange should short to hedge her portfolio.

A. 1,455 S&P 500 futures contracts

B. 925 S&P 500 futures contracts

C. 876 S&P 500 futures contracts

D. 722 S&P 500 futures contracts

Q.640 Julia Lange, an investment manager, has constructed a portfolio with a beta of 0.78 that somewhat mirrors the S&P 500 index. The investment manager hedged the portfolio 1 month ago by taking a short position in the S&P 500 futures. The portfolio had a value of $672,000,000, and the S&P 500 index futures price at the time of the purchase was 2,906, with each contract on 250 times the index. If the S&P 500 futures contract price fell to 2,715 this month, then estimate the number of additional contracts Lange should buy/short to hedge her portfolio, assuming that the portfolio value does not change.

A. The manager must short an additional 50 S&P 500 futures contract to hedge the portfolio.

B. The manager must buy 50 S&P 500 futures contracts to hedge the portfolio.

C. The manager must short an additional 2,715 S&P 500 futures contracts to hedge the portfolio.

D. The manager must short an additional 772 S&P 500 futures contracts to hedge the portfolio.

Q.641 The index futures contracts are not only used to hedge the risk of the portfolio but sometimes the futures contracts are also used to change the current systematic risk or the beta of the portfolio to a desirable level. Here are two potential strategies to reduce and increase the beta of a portfolio:
I. If the beta of the portfolio is to increase from its current beta, a short position in a specific number of additional futures contracts must be taken
II. If the beta of the portfolio is to reduce from its current beta, a long position in a specific number of additional futures contracts must be taken

Which of the potential strategies is/are accurate?

A. The strategy to increase the beta is accurate, but the strategy to reduce the beta is inaccurate.

B. The strategy to reduce the beta is accurate, but the strategy to increase the beta is inaccurate.

C. Both strategies to increase and reduce the beta of the portfolio are accurate.

D. Neither strategies are accurate.

Q.642 An investor owns a portfolio of some of the S&P 500 stocks that worth $50 million. The systematic risk of the portfolio to the S&P 500 index is 0.96. The investor wants to remove the systematic risk from his portfolio completely, so he decides to reduce the portfolio's beta to zero. If the value of the S&P 500 index futures contracts is 1,111 and each index point costs $250, how many contracts should he use to reduce the systematic risk?

A. The investor must buy 173 index futures contracts

B. The investor must short 173 index futures contracts

C. The investor must buy 180 index futures contracts

D. The investor must short 180 index futures contracts

Q.643 Adam Ryman was taking an aptitude test to join the graduate trainee program of a German investment bank. One of the questions in the exam asked to identify in which of the following processes an investor closes out the existing position as the maturity of the futures contract approaches and replaces it with another futures contract with a later delivery date or maturity. Which of the following is the correct answer to the question?

A. Cross-over hedging.

B. Rolling a hedge forward.

C. Basis risk of hedging.

D. Reducing the beta of the portfolio.

Q.644 A French carmaker expects to purchase 50,000 tons of copper at the end of April. The copper futures contracts on the Eurex Exchange are available for the delivery months of March, June, September, and December, and the size of one contract is for one ton of copper. The company took a long position in June contracts on March 1st at a futures price of 2.450 Euros per ton. If the futures price and spot price on the closing date are 2.42 and 2.30, respectively, then calculate the net cost in Euros and the gain or loss on the futures contract.

A. The net cost is €116,500, and the loss on the contract is €6,000.

B. The net cost is €121,000, and the loss on the contract is €6,000.

C. The net cost is €116,500, and the loss on the contract is €1,500.

D. The net cost is €121,000, and the loss on the contract is €7,500.

Reading 33: Foreign Exchange Markets

Q.880 Iron Cement Co. is a Pakistani company. In 2015, the company obtained a €200 million loan facility from The Bavaria Bank (headquartered in Frankfurt, Germany). The proceeds were used to build a new cement plant in Pakistan. Due to Pakistan's fast-paced growth in the past few years, the Pakistani rupee has appreciated against most of the actively traded currencies, including the euro. Which of the following impacts is accurate, if the company pays back the loan today?

A. The liability of the Pakistani firm has increased due to the currency appreciation.

B. The liability of the Pakistani firm has decreased due to the currency appreciation.

C. The liability of the Pakistani firm remains unaffected due to the currency appreciation.

D. The liability of the Pakistani firm has increased since the loan is denominated in Euros.

Q.882 In recent years, India and China have become Asia's giants when it comes to information technology. India is a market leader in software development, while China is leading in the sector of IT. The two countries also have a bilateral trade agreement. India exports software to China and China sells hardware of the IT sector to Indian firms. If the Indian rupee has appreciated against the Chinese yuan, then determine which of the following effects of appreciation is correct.

A. Indian goods will be cheaper for Chinese importers, while Chinese goods will become more expensive to Indian buyers.

B. Indian goods will be more expensive for Chinese importers, while Chinese goods will be cheaper for Indian buyers.

C. Indian goods will be cheaper for Chinese importers, and Chinese goods will also be cheaper for Indian buyers.

D. Indian goods will be more expensive for Chinese importers, and Chinese goods will also be more expensive for Indian buyers.

Q.886 Jasmine Forst is a risk manager at Lifelong Insurance Company. The company has a number of outstanding exposures in various foreign currencies. Today, she is analyzing the company's current outstanding exposures in foreign currencies to derive the possible effects of exchange rates on these exposures. Which of the following is true regarding Lifelong Insurance Company?

A. If the company has a net short position in a specific foreign currency, then the company's risk increases if the value of the foreign currency depreciates against the dollar.

B. If the company has a net short position in a specific foreign currency, then the company's risk increases if the value of the foreign currency appreciates against the dollar.

C. If the company has a net long position in a specific foreign currency, then the company's risk increases if the value of the foreign currency appreciates against the dollar.

D. If the company has a net long position in a specific foreign currency, then the company's risk increases if the value of the domestic currency depreciates against the dollar.

Q.887 Sandy Lee is a junior economist at a mid-sized asset management company based in Boston. The company is considering making an investment in foreign bonds denominated in Swiss francs. For this type of investment, it is vital to estimate the impact of the exchange rate on the investment value. Which of the following is accurate?

A. If the supply for Swiss francs increases, the value of the investment of the company will increase.

B. If the demand for Swiss francs increases, the value of the investment of the company will increase.

C. If the supply of the US dollar decreases, the value of the investment of the company will increase.

D. If the demand for Swiss francs increases, the value of the investment of the company will decrease.

Q.893 An analyst is analyzing the exchange rate of the Turkish lira in terms of U.S. dollars. The current exchange rate is TRY 3.6 per USD, and the real interest rate in both countries is 2%. Suppose that the prices of Turkish goods increased by 7%, and the prices of U.S goods increased by only 5.5%, then determine which of the following statements is true.

A. The Turkish lira has depreciated in value against the USD.

B. The Turkish lira has appreciated in value against the USD.

C. The USD has depreciated in value against the USD.

D. There has been no impact on the exchange rates as the real interest rate is identical in both countries.

Q.894 Which of the following theories suggests that the difference between the spot and the forward rates is due to the difference in interest rates?

A. Purchasing power parity theory.

B. Interest rate parity theory.

C. Fischer theory.

D. None of the above.

Q.895 A foreign currency analyst based in Dubai is forecasting the forward exchange rate USD/AED. Currently, the USD/AED spot exchange rate is 3.33. Suppose that the interest rate in the United Arab Emirates is 2% and the interest rate in the U.S. is 4%, determine the 1-year forward exchange rate of USD/AED.

A. 3.455

B. 3.400

C. 3.395

D. 3.266

Q.3573 Approximate the real interest rate if the nominal interest rate is 11% and inflation is 3.5%.

A. 14.5%

B. 13.5%

C. 7.5%

D. 7.25%

Q.3575 Due to the upcoming elections, the exchange rate USD/CAD has risen from 1.17 to 1.31. Which of the following statement is correct?

A. The Canadian dollar has appreciated by 11.97%

B. The US dollar has depreciated by 11.97%

C. The US dollar has appreciated by 10.69%.

D. The Canadian dollar has depreciated by 10.69%

Q.3579 If the exchange rate quote for the euro (EUR/USD) changes from 1.3500 to 1.2600, then in approximate terms:

A. The euro depreciated by 6.7%, and the dollar appreciated by 7.1%

B. The dollar depreciated by 6.7%, and the euro appreciated by 7.1%

C. The euro appreciated by 10.1%, and the dollar depreciated by 5%

D. The euro depreciated by 5%, and the dollar appreciated by 10.1%

Q.3580 If the USD/BRL exchange rate changes from 3.1625 to 3.5000, then in approximate terms:

A. The real depreciated by 9.6%, and the dollar appreciated by 10.7%

B. The dollar depreciated by 9.6%, and the real appreciated by 10.7%

C. The dollar appreciated by 9.6%, and the real depreciated by 10.7%

D. The real appreciated by 9.6%, and the dollar depreciated by 10.7%

Q.3581 If the exchange rate quote for the Mexican peso (USD/MXN) changes from 11.9500 to 12.4000, then in approximate terms:

A. The peso depreciated by 3.8%, and the dollar appreciated by 3.6%

B. The dollar depreciated by 3.8%, and the peso appreciated by 3.6%

C. The peso appreciated by 3.8%, and the dollar depreciated by 3.6%

D. The dollar appreciated by 3.8%, and the peso depreciated by 3.6%

Q.3814 The quote between currency X and Y is 1.3000, where currency Y is the base currency. What is the number of units of currency X required for the exchange of 50 units of currency Y?

A. 65

B. 70

C. 85

D. 64

Q.3816 A UK-based company funds its Mexican investment by borrowing in euros (EUR) and buying the Mexican peso (MXN), and after some time, the company exchanges the money back to euros. What kind of transaction is this?

A. Outright transaction

B. FX swap

C. Currency futures

D. Forex forward

Q.3817 Firms in the foreign exchange market are exposed to risks. What is the difference between translation and transaction risks?

A. Transaction risks are prone to transactions that are aligned to domestic currency while translation risk arises due to transaction aligned to foreign currency

B. Transaction risks occur due to cash inflows and outflows in a foreign currency while the translation risk occurs due to exposure to FX gains and losses when the assets and liabilities dominated in a foreign currency are exchanged into domestic to generate financial statements.

C. Translation risks arise due to cash inflows and outflows in a foreign currency while the transaction risk occurs due to exposure to FX gains and losses when the assets and liabilities dominated in a foreign currency are exchanged into domestic to generate financial statements.

D. None of the above

Q.3818 Assume the USD/CAD spot quote is bid 1.2800 and ask 1.2950. The six-month forward points quote is bid 40.60 and ask 56.50 The forward bid-ask spread is closest to:

A. 0.00565

B. 0.30065

C. 0.00406

D. 0.01659

Q.3819 In a particular year, the inflation rate in China is higher than in the US. What is likely to happen to the US-China exchange rate according to Purchasing power parity?

A. The US currency will weaken with respect to the Chinese yuan

B. The Chinese currency (yuan) will decline relative to the US dollar

C. There will be no change in the US-China exchange rate

D. All of the above

Q.3820 The spot rate for the USD/EUR is 1.3261. The interest rate in USD is 2% and in EUR is 3%. What is the 6-month EUR/USD forward rate?

A. 1.3411

B. 1.3326

C. 0.7504

D. 0.5321

Q.3821 The nominal interest rate in the country is 3% and the inflation rate is 5%.
What is the value of real interest rate?

A. 10%

B. 5%

C. 2%

D. -2%

Q.3822 The nominal interest rate in the country is 3% and the inflation rate is 5%.
Which of the following statements is true about this country?

A. When an investor earns at 3%, the investor's purchasing power decreases by 2% each year

B. When an investor earns at 3%, the investor's purchasing power increases by 2% each year

C. The total return by the investor in this country is equivalent to 8%

D. An investor in this country should always expect a loss of 5% per year.

Q.3823 In a particular year, the interest rates for USD increase while that of the euro remain unchanged.
What will happen to the forward exchange rate USDEUR?

A. It will increase.

B. It will decrease.

C. It will appreciate.

D. None of the above.

Q.3824 The interest rate on the Nigerian Naira (NGN) is 2%, and that of the South African rand (ZAR) is 7%. Given that the spot rate NGN/ZAR is 1.3500, what is the 6-month forward exchange rate quoted as points?

A. 135

B. 327

C. 365

D. 478

Q.3825 Which of the following statements is most likely to be incorrect?

A. The bid-offer spread is the difference between the offer price and the bid price.

B. The bid-offer spread is larger for very large transaction in the FX market

C. The offer price is always lower than the bid price

D. None of the above

Q.3826 Consider the following information

Currency	Libor (annualized)	Currency Combinations	Spot Rate
CAD	0.62%	CAD/GBP	0.60
GBP	6.96%	AUD/GBP	0.0074
AUD	0.75%	AUD/CAD	0.95

If the covered interest rate parity holds, what is the forward rate of AUD/GBP currency for one year?

A. 0.0070

B. 0.0079

C. 0.0063

D. 0.0054

Q.3827 In a given market, the nominal rate of interest is 3% and the estimated inflation rate is 4%. Which of the following statements is correct regarding the market?

A. When an investor earns a return of 3%, the purchasing power of the investor is reduced by 1%.

B. When an investor earns a return of 3%, the purchasing power of the investor is reduced by 5%.

C. When an investor earns a return of 3%, the purchasing power of the investor is increased by 1%.

D. When an investor earns a return of 3%, the purchasing power of the investor is reduced by 7%.

Q.3828 A USD/CAD currency rate of 1.6598 *most likely* implies that:

A. One US dollar (USD) can buy 1.6598 Canadian dollars (CAD).

B. One Canadian dollar (CAD) can buy 1.6598 US dollars (USD).

C. The US dollar (USD) appreciates by 1.6598.

D. The Canadian dollar (CAD) appreciates by 1.6598

Q.3829 A forex trader noticed the EUR/USD spot rate was 1.2960 and expected to be 1.2863 after one year. What is the euro (EUR) expected appreciation/depreciation against the US dollar over the next year?

A. -0.748%

B. 0.748%

C. 0.651%

D. -0.651%

Q.3830 What does a 4% appreciation in the CNY/ZAR exchange rate imply?

A. It represents a 4 percent appreciation in the South African Rand (ZAR) as compared to the Chinese Yuan.

B. It represents a 4 percent appreciation in the Chinese Yuan (CNY) as compared to the South African Rand.

C. It represents a 4 percent depreciation in both the Chinese Yuan (CNY) and the South African Rand.

D. It represents a 4 percent depreciation in the South African Rand as compared to the Chinese Yuan (CNY)

Q.3831 Using the table of maturity and forward points or spot rate below, what is the three-month forward rate given that the spot exchange rate is 1.6459.

Maturity	Spot rate or forward points
One week	−0.2
One month	−1.0
Three months	−5.6
Six months	−12.7
Twelve months	−25.3

A. 1.64534

B. 1.45677

C. 1.63546

D. 1.65342

Q.3832 The 6-month forward quote for the USD/CAD is 1.500. What is the corresponding CAD/USD future quote?

A. 0.86432

B. 0.98538

C. 0.66667

D. 0.56432

Q.3833 Suppose that the quote between currency A and currency B is 1.5000 and that currency B is the base currency. How many units of currency A should be exchanged for 200 units of currency B?

A. 150

B. 1.5

C. 200

D. 300

Q.3834 In India, the price index was 117 last year, and the price level index this year is 125. If the real interest rate in India is 7.5%, what is the nominal interest rate?

A. 15.40%

B. 14.34%

C. 8.00%

D. 11.5%

Q.3835 A multinational uses options for hedging against FX risk on its monthly transactions. Which of the following does the multinational need to do to minimize hedging costs?

A. Purchasing options on each currency in the market.

B. Purchasing options on a basket of currencies rather than individual currency

C. Buy an option on a single exposure that applies in one time period (like one month)

D. Buy an option on a single exposure that applies several months

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Q.4453 Consider a hypothetical world of two countries only. A fund manager borrows funds from a country with interest rate X and invests in another country with interest rate Y, where X < Y. He intends to generate profit from the interest differential between the two countries. The major risk in this strategy is:

A. None – it's a riskless strategy.

B. The interest differential may increase.

C. The exchange rate of the currencies may change.

D. None of the above.

Q.4893 If the interest rates of currency AAA increases and that of currency BBB remains constant, what will happen to forward rates if the exchange rate is quoted as AAA/BBB?

A. Forward rates increase.

B. Forward rates decrease.

C. Forward rates remain constant.

D. None of the above.

Q.4895 Which of the following is the correct difference between translation and transaction risk?

A. As compared to transaction risk, translation risk does not affect the cash flows of a company.

B. As compared to translation risk, transaction risk does not affect the cash flows of a company.

C. Translation risk is hedged using outright forward transactions and swaps.

D. Transaction risk is hedged using the forward contracts.

Q.4896 Which of the following is **not** a factor that determines the exchange rate?

A. Inflation.

B. Monetary policy.

C. The purchasing power of a country.

D. Balance of payments and trade flows.

Reading 34: Pricing Financial Forwards and Futures

Q.665 An investment manager at Galaxy Asset Management instructs his broker to short sell 2,000 shares of Solar Computer Corp. in April. The broker borrowed the shares from another client and shorted the 2,000 shares of Solar at €456.8 per share. The manager then asked the broker to close the short position in mid-September when the price per share got to €455.8. If the shares paid a dividend of €1.85 per share in July, then calculate the net payoff of the investment manager after closing out the position. (For this question, assume there are no fees, commissions, or margins.)

A. The investment manager will receive a net cash inflow of €913,600

B. The investment manager will pay a net cash outflow of €911,600

C. The investment manager will pay a net cash outflow of €1,700.

D. The investment manager will pay a net cash outflow of €3,700

Q.667 Which of the following situations correctly depicts a short squeeze scenario?

A. The prices of shares of a specific firm are continuously decreasing causing more and more investors to short sell the shares of that firm.

B. The prices of shares of a specific firm are decreasing rapidly, and the supply of shares is greater than its demand.

C. The prices of shares of a specific firm are increasing rapidly, forcing short sellers to closeout their positions.

D. The process of borrowing the shares of a specific firm from a client and selling them at the current rate with the expectation of purchasing the same shares at lower prices in the future.

Q.668 Brad Lee is a derivatives trader at AMG Investments based in California. Brad is analyzing the shares of Kevin Heart Shoes Company that are currently trading at $119.4 per share. Kevin Heart shares are comparatively new in the market, as the company's IPO was the last quarter. A forward contract to purchase the stock in 6-month is being offered at $122.98. If the risk-free rate is 6% per annum, compounded semi-annually, then determine which of the following transactions will bring positive net cash flow for Lee if he wants to close his position in exactly 6 months?

A. Borrow $119.4 at the risk-free rate to purchase the stock at the current price and then short the stock at the forward price of $122.98.

B. Short sell the stock at the current price of $119.4, invest the proceedings at the risk-free rate, and take a long position in the forward contract to purchase the stock at $122.98

C. Both of the above-mentioned transactions will bring positive net cash flows

D. None of the above-mentioned transactions will bring positive net cash flows

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Q.669 Kevin Rodriguez is a candidate for the position of a junior trader at a mid-sized investment bank in Mexico. The bank's hiring process is rigid, consisting of 1 written exam and 2 interviews. Rodriguez has cleared the written exam and is currently being interviewed by the recruitment committee. The committee asked Kevin to describe the situation where an investor can make a risk-free profit on a forward contract. Kevin presented the following two scenarios:
I. If the forward price of the stock is greater than the current price, the investor can profit by purchasing shares at the current price and shorting shares at the forward price.
II. If the current price of the stock is greater than the forward price, the investor can profit by purchasing shares at the current price and shorting shares at the forward price.

Assuming that the forward price being considered differs from the forward price implied by the spot price and the current interest rate, which of the above-mentioned scenarios will generate profit?

A. Scenario I will generate a profit, and scenario II will generate a loss

B. Scenario I will generate a loss, and scenario II will generate a profit

C. Scenario I will generate a profit, and scenario II will also generate a profit

D. Scenario I will generate a loss, and scenario II will also generate a loss

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Q.670 Priyanka Singh is a derivative investment manager at Hind Investments based in Mumbai. Priyanka is analyzing the shares of Cosmetic World Company that are currently trading at $76.2 per share. Cosmetic World has the largest market shares in the cosmetics market of Asia, and the company has been profitable for over a decade. The 3-month forward contract on the stock is being offered for the price of $86.8. Priyanka Singh wants to trade 5,000 shares of Cosmetic World with the intention of closing the position in 3 months. If the risk-free interest rate is 5%, then determine the arbitrage profit.

A. $77,158

B. $68,485

C. $50,798

D. $48,324

Q.671 Harry Gayle is a fixed investment analyst at one of the biggest investment banks in Boston. He is analyzing forward contracts on the bond of Cube Corp. The current price of Cube Corp is $950, and the bond pays a semiannual coupon of 12%. The face value of the bond is $1,000. The forward contract on Cube Corp's bond is available for the price of $960 with maturity in 6 months, while the coupon on the bond is expected to be received in 3 months. If the risk-free rates for 3-month and 6-month treasuries are 3% and 4.2%, respectively (compounded annually), then what is the net gain or loss from the contract?

A. Net gain of $51.05

B. Net loss of $10.16

C. Net gain of $49.84

D. Net loss of $42.57

Q.672 George Brown, a fixed-income investment analyst, is determining the price of a 6-month forward contract on a unique asset. The risk-free rate of interest is 12% per year whereas the semiannual dividend yield on the asset is 7%. If the asset price is $95, then what is the price of the forward contract?

A. $100.8

B. $98.32

C. $97.14

D. $96.13

Q.673 Karen Kindle is a master's student at one of the top business schools in Taiwan. He reads at least one book on the subject of stocks and derivatives every weekend. Last week's book was on the subject of pricing and valuation of forward contracts. From his understanding, he made the two following conclusions regarding the value of forward agreements:
I. The value of the contract at the time of initiation is always zero.
II. Once the forward contract is initiated, the contract can have a positive value to both counterparties at the same time.

Which of the conclusion is incorrect?

A. Conclusion I is incorrect

B. Conclusion II is incorrect

C. Both conclusions are incorrect

D. None of the conclusions are incorrect

Q.674 Consider a forward contract on a stock index such as the S&P 500. Everything else being constant, which of the following statements is least accurate?

A. The forward price will fall if interest rates rise

B. The forward price is directly linked to the level of the stock market index

C. If the time to maturity is increased, the forward price will rise

D. The forward price will fall if dividend payments on the underlying stocks increase

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Q.675 Hania Ahmed is a freelance blogger for a website that publishes articles on economics, finance, and international business. She mostly writes about derivatives trading strategies. In one of her latest articles regarding the relationship between forward and futures contracts, she concluded her article with the following two statements:
I. When the prices of the underlying assets are highly positively correlated with interest rates, the prices of forward contracts tend to be higher than the prices of futures contracts.
II. When the prices of the underlying assets are highly negatively correlated with interest rates, the prices of futures contracts tend to be higher than the prices of forwards contracts.

Which of the following options is correct?

A. Statement I is correct, while statement II is incorrect

B. Statement I is incorrect, while statement II is correct

C. Statement I is correct, and statement II is also correct

D. Statement I is incorrect, and statement II is also incorrect

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Q.676 Ellen Harper, a portfolio manager at Deutsch Investments Group (DIG), is considering investing in the 6-months futures contract on the German DAX-30 index. The DAX-30 is currently valued at 12,240 with a dividend yield of 1.7% per year. If the risk-free rate in Germany is 3.2%, then the price of the futures contract should be:

A. 12,241

B. 12,330

C. 13,080

D. 12,578

Q.677 Amy Damian is a portfolio manager at a local pension fund. She has recently received great appreciation from the upper management of the fund because of her arbitrage profit of $1.6 million on index futures. She earned arbitrage profit during the period where the prices of futures contracts on the S&P 500 were trading lower than the current prices of the index. Which of the following trading strategies must she have used?

A. Purchasing the stocks whose movement closely mirrors the S&P 500 index and short-selling S&P 500 futures

B. Short-selling the stocks whose movement closely mirrors the S&P 500 index and taking a long position in S&P 500 futures

C. Purchasing the stocks whose movement closely mirrors the S&P 500 index and taking a long position in S&P 500 futures

D. Short-selling the stocks whose movement closely mirrors the S&P 500 index and taking a short position in S&P 500 futures

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Q.680 The person who takes a short position usually:

A. sells an asset that he does not own with the intent of buying it back in the future at a lower price.

B. buys an asset with the intent of selling it in the future at a higher price for profit.

C. sells an asset that he does not own with the intent of buying it back in the future at a higher price.

D. owns the asset but sells it with the intent of buying it back at a higher price.

Q.681 Harry McGuire is a recruitment specialist at a small size investment company that specializes in derivatives and fixed income assets. McGuire has a basic knowledge of investing and trading. He has prepared an informative presentation on the subject of derivatives, which is going to be used for the purpose of recruiting on university campuses. One of the slides from McGuire's presentation contained the following information:
"Futures and forward contracts can be written on many assets. These assets can be investment assets such as equities, bonds, gold, and crude oil, or consumption assets like corn, copper and livestock."

Which of the assets are incorrectly categorized?

A. Gold

B. Crude oil

C. Copper

D. Corn

Q.3530 Long positions in futures contracts are more desirable to forward contracts when the correlation between futures prices and interest rates is:

A. Zero

B. Positive

C. Negative

D. Known in advance using the spot curve

Q.4673 An investor considers investing in a forward contract to buy an asset currently valued at USD 500 for USD 800 in 2 years. Given that the current interest rate is 5% with annual compounding, what is the current value of the forward contract?

A. 346.49

B. -225.62

C. 235.62

D. -220.45

Q.4897 Suppose that Paul enters into a 3-year forward contract on a stock that pays no dividends and that the current stock price is USD 35 and the annually-compounded risk-free rate is 5% What is the forward price of this forward contract?

A. $40.52

B. $36.75

C. $30.23

D. $40.67

Q.4898 Suppose that John enters into a 3-year forward contract on a bond. The spot price of the bond is USD 80. The bond is expected to provide a coupon of USD 5 at the end of the 1^{st} year and the 2^{nd} year. The annually compounded risk-free rate for all maturities is 4% per year. What is the 3-year forward price?

A. $89.99

B. $79.38

C. $84.79

D. $ 83.90

Q.4899 What is the 2-year futures price on the stock index, whose value is USD 2,000, and that the annually compounded risk-free rate is 5% per annum, and the annual dividend yield on the index is 2%?

A. $2,119.38

B. $2,289.80

C. $2,121.80

D. $1,887.34

Q.4900 Paul enters into a two-year forward contract on a stock that pays no dividends and that the current stock price is USD 33 and the annually-compounded risk-free rate is 5% per year. Suppose that one year after the forward contract was initiated, the spot price is USD 35, and the risk-free rate has changed to 6% per annum. What is the value of this forward contract?

A. 2.22

B. 0.68

C. 1.90

D. 2.33

Q.4901 What would you expect when there is a negative correlation between return on assets and interest rates?

A. The forward price is greater than the futures price.

B. The forward price is less than the futures price.

C. The forward price is equal to the futures price.

D. None of the above.

Reading 35: Commodity Forwards and Futures

Q.804 Commodity futures and forward markets have been growing at an exponential rate in terms of size in the past years. It is said that more contracts are traded on futures contracts than they are traded on the commodities themselves. In the United States, futures contracts are available on almost every commodity except two. Identify these two commodities which are prohibited in futures markets by law.

A. Potatoes and Onions.

B. Movie receipts and lottery receipts.

C. Onions and movie receipts.

D. Potatoes and lottery receipts.

Q.805 Henry Luis is a commodity trader at a mutual fund that focuses on derivatives and commodities investments. Luis was instructed to pay special attention to the storage costs and cost of carry while valuing the commodities futures contract. Which of the following commodities is likely to have the smallest storage costs?

A. Crude oil

B. Corn

C. Livestock

D. Gold

Q.806 Commodities futures markets consist of hundreds of different commodities with different properties and attributes. Some commodities do not consider the storage costs separately because, in those commodities, the forward price of the commodity compensates the commodity owner for the cost of storage. Such commodity markets are referred to as:

A. Discount markets.

B. Free markets.

C. Carry markets.

D. Forwards markets.

Q.807 Anton Patrick is a finance and accounting professor at the Boston Business College (BBC). Currently, he is teaching the subject of commodities and derivatives to first-year undergrad finance students. During a surprise quiz, he asked some students to define the use of “lease rate” in commodities markets. Three of the students gave the following definitions. Which one of them is/are correct?
Student 1: “Lease rate is the risk-free rate at which a long position holder in the futures contract can finance his position.”
Student 2: “Lease rate is widely used as an underlying asset on a futures contract.”
Student 3: “Lease rate is the rate used by short-seller of the commodity to compensate the lender of the commodity for the lending.”

A. Student 1 is correct.

B. Student 2 is correct.

C. Student 3 is correct.

D. Students 2 and 3 are correct.

Q.808 John Sinclair is a high net worth individual investor and the owner of a chain of independent fossil fuel power plants in Saint Petersburgh, Russia. During a web conference with his investment advisor from Canada’s largest investment bank, the advisor advised Sinclair to invest in futures contracts on Crude and Brent oil. He mentioned that apart from the monetary gains, the investor might also receive nonmonetary benefits from the physical possession of these commodities. Which of the following benefits is the investment advisor referring to?

A. Risk-free rate

B. Lease yield

C. Convenience yield

D. Roll-over yield

Q.809 Busra Turkmen is a business newscaster and an economic analyst at one of the leading business and finance-focused news channel in Germany. While writing the evening business report, she noticed that the prices in gold forwards contracts are upward sloping, which means the forward prices of longer maturity gold contracts are higher than the prices of shorter maturity gold contracts. Which of the following terms can she use to define the given trend in gold forward prices?

A. Convenience yield.

B. Backwardation.

C. Upwardation.

D. Contango.

Q.810 In the United States, forward and futures contracts are available for trading on various commodities. These commodities are classified in the categories of extractable or renewable and primary or secondary. Which of the following commodities can be classified as renewable as well as a primary commodity?

A. Oil

B. Copper

C. Livestock

D. Gasoline

Q.811 Mika Singh is the head of the commodities trading unit at an investment company. Singh has 5 years of experience in trading commodities derivative products. One of his subordinates seems to lack knowledge about forward prices. Singh wrote an email to his subordinate that contained the following two explanation regarding forward price:
I. The prepaid forward price for a commodity is the present value of the futures price of a commodity that is to be received on a specific future date
II. The forward price of a commodity is the future value of the prepaid forward price of the commodity

Which of the above-mentioned explanation is incorrect?

A. Only explanation I is incorrect.

B. Only explanation II is incorrect.

C. Both explanations are incorrect.

D. None of the above.

Q.813 A commodities trader at an investment bank has analyzed the forward prices of gold contracts and realized that there might be an arbitrage profit present in gold futures contracts. The spot price for one ounce of gold is $1,205 and the 6-month futures contract is quoted as $1,253 per ounce. If the risk-free rate is 6% (compounded continuously), then the arbitrage profit for trading one gold futures contract is:

A. $7.81

B. $23.61

C. $11.31

D. $10.96

Q.814 Branden Berger is an active trader at Eclipse Funds. He has been closely monitoring the spot prices and forward prices of corn bushel for a long time. He has noticed that the spot price and the 1-year forward price of a corn bushel contract are identical at $6.90 per corn bushel. If the risk-free rate is 8%, then which of the following strategy will earn him arbitrage profit?

A. Borrow the amount equal to the spot price of corn for 1 year at the risk-free rate of 8%, buy a corn bushel at the spot price, and take a short position in a 1-year corn forward contract. At the expiration of the contract, the investor will sell the corn bushel at the futures price and pay off the borrowed money with interest.

B. Borrow the amount equal to the spot price of the corn bushel, lend the money for one year at the risk-free of 8%, and take a long position in a corn forward contract. After one year, the investor will receive the lent money with interest, receive the corn bushel at the expiration of the contract, and deliver the corn bushel.

C. Short sell corn at the spot price of $6.90 per bushel, lend the money for one year at the risk-free of 8% and take a long position in a corn forward contract. After one year, the investor will receive the lent money with interest, receive the corn bushel at the expiration of the contract, and deliver the corn bushel.

D. Since the spot price of the corn bushel is equal to the 1-year forward price of the corn forward contract, an arbitrage profit is not possible.

Q.815 Branden Berger is an active derivative trader at the Eclipse Funds. He has been closely monitoring the spot prices and forward prices of corn bushel for a long time. He has noticed that the spot price and 1-year forward price of a corn bushel contract are identical at $6.90 per corn bushel. If the risk-free rate is 8%, then the arbitrage profit is equal to:

A. $0

B. $0.53

C. $0.55

D. $1.06

Q.816 An investor is analyzing a 6-month oil forward contract that is quoted as $54 per barrel. The spot price of oil is $55 per barrel, and the risk-free rate is 10%. In order to earn risk-free profits, the investor short sells oil at the spot price of $55, lends the money for 6 months at risk-free of 10%, and takes a long position in an oil forward contract for the price of $54 per barrel.
After 6 months, the investor receives the lent money with interest equaling $57.68, purchases the oil at the forward price of $54, and delivers the oil to earn an arbitrage profit of $2.68 per barrel. Which of the following strategies has he most likely implemented?

A. Cash-and-carry arbitrage strategy.

B. Arbitrage-free strategy.

C. Reverse cash-and-carry strategy.

D. Binominal arbitrage strategy.

Q.817 Salona West is a portfolio manager at Global Hedge Fund Inc. She received an email from a junior investment analyst, suggesting that a reverse cash-and-carry arbitrage opportunity exists in 6-month gold futures contracts as the spot prices of gold are higher than the corresponding forward prices. West believes that such an opportunity would be unlikely in gold contracts due to the following reasons:

I. The suggested transaction doesn't include the consideration of a lease payment

II. Since an active lending market in the gold market exists, the lender uses the forward price to determine the lease rate, and a no-arbitrage pricing will be established

Which of the West's justification for no-arbitrage pricing is/are correct?

A. Statement I

B. Statement II

C. Both statements I and II

D. Neither statement I nor statement II

Q.818 An investor is interested in taking a long position in a 12-month cotton forward contract. Estimate the 12-month forward price for cotton that has a spot price of \$37 per pound and an annual lease rate of 5% if the risk-free rate for the commodity is equivalent to 7.5% with annual compounding.

A. \$39.88

B. \$38.89

C. \$37.88

D. \$36.08

Q.819 Ahmet Abdullah is a research analyst at Klosky Investment Company. He is interested in analyzing the forward price curve trend of silver prices. Due to a lack of trading, he is unable to get the forward prices for silver. However, he found out that there is an established lending market for silver and the silver lease rate is 7.9%. If the risk-free rate is 8.2%, then which of the following is true?

A. The market for silver is said to be in backwardation

B. The market for silver is said to be in contango

C. The market for silver is said to be in upwardation

D. It cannot be ascertained without forward prices

Q.820 An analyst is identifying the effects of storage cost, lease rate, and convenience yield on the forward prices of storable commodities. After testing these effects, the analyst has concluded the following three points:
I. The presence of a lease rate reduces the forward price of a commodity
II. The presence of a convenience yield increases the forward price of a commodity
III. The presence of storage costs reduces the forward price of a commodity

Which of the above statements are correct?

A. I & II

B. II & III

C. I & III

D. I only

Q.821 An analyst is analyzing the effect of storage costs and convenience yields on the forward prices of livestock. The storage cost of the livestock is 1.3%, and the convenience yield is 2.9%. Evaluate the final impact on the forward price of livestock if the risk-free rate is 1.4%.

A. The forward price of livestock will be greater than the spot price of livestock.

B. The forward price of livestock will be lower than the spot price of livestock.

C. The forward price of livestock will be equal to the spot price of livestock.

D. The forward price of livestock cannot be ascertained.

Q.822 Garry Johnson has recently joined the derivatives unit of Brilliance Investment Bank as a research analyst. He has been assigned to focus his research on the energy sector. Johnson is analyzing spot prices and forward prices of Crude and Brent oil contracts in the futures markets, and he notices a trend in forward prices. The forward prices of oil contracts are in a downward sloping curve, which means the forward prices with larger maturities are lower than the forward prices of oil futures with shorter maturities. This trend in forward prices is referred to as:

A. Diminishing curve

B. Backwardation

C. Upwardation

D. Contango

Q.823 An investment manager is analyzing the forward curve of a specific commodity, which will help him identify if the forward price of the commodity will be higher or lower than the spot price. Suppose that the manager has figured that the lease rate of the specific commodity is 6.5% and the risk-free rate is 6%, then determine which of the following option is true.

A. The market of the commodity is in contango.

B. The market of the commodity is in backwardation.

C. The market of the commodity is in upwardation.

D. It could not be ascertained without established forward quotes.

Q.3527 The spot price of oil is USD 95 per barrel, and the six-month futures price is USD 100 per barrel. The cost of storing oil for six months has a present value of USD 10 per barrel, and the risk-free rate is 5% per year.
Determine the convenience yield, Y.

A. 7.6%

B. 5.0%

C. 4.5%

D. 15.8%

Reading 36: Options Markets

Q.724 Jessie Leeson has spent her last semester studying abroad at the University of Vienna. She took advanced finance and derivatives courses during her semester abroad where she studied pricing, valuing, hedging, and trading strategies involving derivatives. During a meeting with her colleagues, one of them asked her to outline the similarities and differences between options, futures, and forwards. She made the following statements:

I. The cost of entering into an option or a futures contract is zero, but forward contracts have a cost.

II. The holder of an option has a right but not an obligation to exercise the option, while the holder of a futures/forward contract has an obligation to honor the contract.

Which of the following is correct?

A. Only statement I is correct.

B. Only statement II is correct.

C. Both statements are correct.

D. None of the statements is correct.

Q.725 Adam Smith is a former computer engineer who has been actively trading stocks and derivatives after his early retirement from a 35-year engineering career. Smith holds 5,000 stocks of Banana Computers. He recently entered into a transaction where he has the right to buy 1,000 stocks from another investor if the value of the stock increases beyond a predefined price. Which of the following accurately defines the transaction?

A. Smith is long put options.

B. Smith is short on equity swaps.

C. Smith is long on equity forwards.

D. Smith is long call options.

Q.727 Emmy Annie, a finance student at the University of Kennesaw, regularly invests her extra income in stocks and derivatives. She owns stocks of ABC Inc., a cleaning company, which are currently trading at $45. She believes the stock will trade below $45 if new regulations on cleaning companies are introduced next month. She is interested in entering an option position that gives her the right to sell her stocks at $45. If the price of the stock goes below $45, suggest the most appropriate option position for Annie.

A. A long call option with the strike price of $45.

B. A short call option with the strike price of $45.

C. A Long put option with the strike price of $45.

D. A short put option with the strike price of $45.

Q.728 Franky M. purchased an American put option from Lee V. on the stocks of Fast Cars Co. to sell 2,000 shares of stock at a price of $3.30 per share. The put option has a strike price of $31.70. If the stock price at the expiration of the option is $30, then which of the following statements is true?

A. Franky lost $6,600 on the short position while Lee gained $6,600 on the long position.

B. Franky lost $6,600 on the long position while Lee gained $6,600 on the short position.

C. Franky lost $3,200 on the long position while Lee gained $3,200 on the short position.

D. Franky lost $3,200 on the short position while Lee gained $3,200 on the long position.

Q.729 Which of the following statements regarding the features of put and call options is correct?
I. The long position holder in a call option is also referred to as the writer of the option
II. The short position holder in a put option is referred to as the seller of the option

A. Only statement I is correct

B. Only statement II is correct

C. Both the statements are correct

D. None of the statements are correct

Q.730 Nina Singh has recently started investing in options after watching some options investing tutorial videos, so her knowledge of options is limited. She has analyzed that she can take one of the four positions in the options market. She can take either a long/buyer position or a short/seller position in a call option. Similarly, she can also take either a long or a short position in put options. Which of the abovementioned positions has unlimited potentials for loss?

A. A long position in a call option.

B. A short position in a call option.

C. A long position in a put option.

D. A short position in a put option.

Q.731 Franklin Cole, an investment manager at Small Lounge Investments Co., has conducted a fundamental research on the shares of Red Hat Corp and instructed his assistant to sell put options on the shares with a strike of $30. The assistant receives a premium of $0.50. If the price of the stock increases from $30 to $33, determine the position's payoff and profit.

A. payoff = $0; profit = $0.50

B. payoff = $0.5; profit = $0.50

C. payoff = $0; profit = $0

D. payoff = $3; profit = $0.50

Q.732 Management at Digi Computational Investments has analyzed that the finance and banking sector of the U.S. is currently in turmoil. The sector has not properly recovered from the last financial crisis, and the new variables underlying the financial sector have already started tumbling. Taking this into consideration, Digi Computational Investments took a long position in a European call option on the Nasdaq-100 Index (NDX) which is composed of 108 non-financial companies at a price of $20 per index option. The strike price of the index option is 3,355, and the option expires in March 2020. If the current index price is 3,457, then estimate the total gain or loss for the buyer of the call option.

A. $ 102

B. $ 98

C. $ 78

D. $ 82

Q.733 A treasury manager at a large manufacturing firm believes that the price of the shares of Bright Star Hospitals Group (HBHG) will increase by at least 30% in value in the coming 2 to 3 years. The manager, therefore, is interested in taking a long position in an option that allows him to purchase the stock anytime it increases in value above some determined strike price, and the option should have an expiry of at least 38 months. Which of the following options is suitable for the manager?

A. Equity call option

B. Index call option

C. Long-term equity anticipation securities

D. Covered call option

Q.734 The following are the strike prices, current prices, and expiration dates for options on equities of various companies.

	Call option on Sun Inc.	Call option on Moon Corp.	Put option on Pluto Co.
Strike price	$109	$113	$87
Current price	$111	$109	$89

If you have long positions in all of these options, then which of the following options is true?

A. The call on Sun Inc. is in the money, the call on Moon Corp. is in the money, and the put on Pluto Co. is out of the money.

B. The call on Sun Inc. is in the money, the call on Moon Corp. is out of the money, and the put on Pluto Co. is in the money.

C. The call on Sun Inc. is in the money, the call on Moon Corp. is out of the money, and the put on Pluto Co. is out of the money.

D. The call on Sun Inc. is out of the money, the call on Moon Corp. is in the money, and the put on Pluto Co. is out of the money.

Q.735 Xiamen Lee has a long position in an American call option on oil futures contract with a strike price of $40 per contract expiring in September. The current price of the oil futures contract has increased to $46, but the investor believes that the price of the contract can further increase. Since it is an American option, the investor can exercise the contract anytime until its expiration in September. Which of the following is the last day on which Xiamen can trade his call option?

A. The third Friday of August is the last trading day of the call option.

B. The third Monday of September is the last trading day of the call option.

C. The third Monday of August is the last trading day of the call option.

D. The third Friday of September is the last trading day of the call option.

Q.736 Hessen Jersey is a final year student in the undergraduate finance and investing program at the Hockenheim University. During the derivatives class at university, the lecturer asked him to define the portions of the option premium. Hessen gave the following definitions:
I. Option premiums consist of two portions, the intrinsic value, and the time value
II. The intrinsic value of a call option is the difference between the current price of the underlying asset and the strike price
III. The time value of a call option is the part of the premium which is in excess of intrinsic value

Which of Jersey's definitions is/are incorrect?

A. Definition I is incorrect.

B. Definition II is incorrect.

C. Definition III is incorrect.

D. None of the definitions are incorrect.

Q.738 An investor is considering an option on the stock of a specific company, which has the strike price of $29 per share and the option expiry date of March. The option is constructed in a way that if the final per share price of the stock reaches $71 at the expiration, the option will give a payoff of $100 to the buyer.
Which of the following best describes this type of option?

A. European call option

B. American call option

C. Binary call option

D. LEAPS call option

Q.741 A portfolio manager at Sea Breeze bank owns 10,000 shares of PNG Corp. The manager does not expect an appreciable price increase in the next six months. To diminish his volatility, the manager has written an option over the shares of PNG Corp. that expires in 6 months. Which of the following defines the manager's position in the option?

A. Covered put option

B. Covered call option

C. Protective put option

D. Protective call option

Q.742 Which of the following is responsible for ensuring that the writer of the option must honor the option or must fulfill the obligations determined under the terms of the option?

A. The exchange

B. The market maker

C. The options clearing corporation

D. The buyer of the option

Q.743 Harry Wilson owns a call option on the shares of Blue Company and a put option on the shares of Green Company. Both companies belong to the booming communication sector of Holland. The sector has been growing at a rate of 7% for the last 5 years. Blue Company recently announced a cash dividend of $1.20 on its stock while Green Company announced a 4-for-3 stock split. Which of the following impacts on the options is accurate?

A. Only the call option on Blue Company will be adjusted for the cash dividend.

B. Only the put option on Green Company will be adjusted for the stock split.

C. Options on both of these companies will be adjusted for the cash dividend and the stock split.

D. None of the companies' options will be adjusted.

Q.3561 Jason Briggs purchased a 3-month call option by paying $0.08. The exercise price of the option is $1.32 while the underlying is priced at $1.35.
Is the option currently in-the-money and at what price will break-even occur?

A. In-the-money: No; Break-even price: $1.27

B. In-the-money: Yes; Break-even price: $1.40

C. In-the-money: Yes; Break-even price: $1.35

D. In-the-money: No; Break-even price: $1.40

Q.3562 Which of the following relationships is correct?

A. Option Premium = Intrinsic Value + Time Value

B. Option Premium = Intrinsic Value - Time Value

C. Option Premium = Time Value - Intrinsic Value

D. Option Premium = Price - Time Value

Q.3563 Which of the following *best* describes the obligation of the writer of a put option?

A. The obligation to buy the underlying security at the option's strike price if the option is exercised

B. The obligation to sell the underlying security at the option's strike price if the option is exercised

C. The right, but not the obligation, to buy the underlying security at the option's strike price if the option is exercised

D. The right, but not the obligation, to sell the underlying security at the option's strike price if the option is exercised

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Reading 37: Properties of Options

Q.744 Which of the variables given below is likely to have the smallest impact on the prices of plain vanilla stock options?

A. The strike price of the option

B. Expected dividend

C. Risk-free rate

D. The creditworthiness of the counterparty

Q.745 Raj Kumar is an individual options investor. He recently started investing in equity options because of his informal experience in investing in equities. He opened two options positions on the stock of Red Horse Auto Inc. Kumar purchased a call option on the company's stock with a specific strike price and later also purchased a put option on the same stock with the same strike price. If the current stock price decreases, then which of the following shows the accurate effect on option prices?

A. The price of the call option will increase while the price of the put option will decrease.

B. The price of the call option will decrease while the price of the put option will increase.

C. The price of the put option will increase while there will be no impact on the price of the call option.

D. The price of the call option will increase while there will be no impact on the price of the put option.

Q.746 The prices of options on the stocks or equities are affected by a number of variables. Some variables directly impact the options while others have an impact on the underlying stock, which in turn also affects the prices of stock options. If the strike price of an option is increased, then which of the following depicts the accurate impact of this increase?

A. The increase in strike price will decrease the price of European put and American put options but increase the price of European call and American call options.

B. The increase in strike price will increase the price of European put and American put options but decrease the price of European call and American call options.

C. The increase in strike price will increase the price of European put and American call options but decrease the price of European call and American put options.

D. The increase in strike price will decrease the price of European put and American call options but increase the price of European call and American put options.

Q.747 Jack Anderson, a portfolio manager at Vito Investment Company, manages an $800 million mutual fund that invest in a large variety of financial instruments. A significant portion of the portfolio is invested in call and put options on the S&P 500 index (SPX), NASDAQ-100 Index (NDX), and Dow Jones Industrial Average (DJX). However, due to upcoming elections in the U.S., the volatility of these indices has increased. Which of the following best describes the impact on index options?

A. The increase in volatility will increase the prices of call index options but decrease the prices of put index options.

B. The increase in volatility will decrease the prices of call index options but increase the prices of put index options.

C. The increase in volatility will decrease the prices of both call and put index options.

D. The increase in volatility will increase the prices of both call and put index options.

Q.748 Kelly Jackson is a junior research analyst at an Asian Investment Fund. The fund has a large exposure to US stocks and options. Jackson is given the task of analyzing the impact on the prices of call and put options if the underlying stock pays a cash dividend. Jackson came up with the following scenarios that show the impact of an increase in cash dividends on call and put options. Which of the four scenarios is consistent with the principles of option pricing?

A. An increase in the expected cash dividend will increase the price of put and call stock options.

B. An increase in the expected cash dividend will decrease the price of put and call stock options.

C. An increase in the expected cash dividend will decrease the price of put options but increase the price of call stock options.

D. An increase in the expected cash dividend will increase the price of put options but decrease the price of call stock options.

Q.749 Mehmet Orkan, a junior investment analyst at an Istanbul-based investment company, is analyzing various call options on U.S. stocks. He has obtained the following call options quotes on some blue-chip companies in the U.S consumer goods sector. Which of the following options has the highest value?

Name	Nature of the option	Expiration date
A	European call option	3 months
B	European call option	9 months
C	American call option	3 months
D	American call option	9 months

A. Option A

B. Option B

C. Option C

D. Option D

Q.751 Upper and lower pricing bounds for American and European call and put options are important in order to prevent investors from earning arbitrage profits. If option prices are above the upper boundary or below the lower boundary, an investor can earn arbitrage profit by opening a position in an options contract and in the underlying stock simultaneously. Which of the following statements is consistent with the upper boundary limit of the American put option?

A. The price of an American put option should be equal to or higher than the current price of the underlying stock.

B. The price of an American put option should be equal to or higher than the strike price of the option on the underlying stock.

C. The price of the American put option should be equal to or lower than the current price of the underlying stock.

D. The price of the American put option should be equal to or lower than the strike price of the option on the underlying stock.

Q.752 Adam Gilbert is a risk manager that works with Global Trade Brokerage Firm in New York City. Global Trade Brokerage is a member of the options exchange which provides brokerage services to option traders and also works as the market maker in the exchange. Gilbert's job responsibility is to derive upper and lower boundaries for options so the prices are arbitrage-free. Which of the following is an accurate estimation of the lower band for European call option prices on a non-dividend-paying stock, if the current stock price is $92 and the strike price of the option on that stock is $89? Suppose the option is expiring in 6 months and the risk-free rate is 8%.

A. $3

B. $3.97

C. $6.49

D. $6.36

Q.753 Vijay Singh works as an investment manager at Global Investment Company in New York. Global also provides brokerage services to its clients. Therefore, it is a usual task at Global to derive upper and lower boundaries for options so the prices are arbitrage-free. Which of the following given options is the accurate estimation of the lower price boundary for European put options on a non-dividend paying stock that expires in 3 months, if the current stock price is $31, the strike price is $33, and the risk-free rate is 10%?

A. $2.37

B. $1.22

C. $2.80

D. $1.19

Q.754 Johanna Smith is a treasury manager at Easy Bank. She manages the treasury affairs and also the investment advisory activities of the bank. She invests in treasury and money market instruments to manage short-term cash, but for long-term cash management, she uses other instruments. Currently, she has invested in zero-coupon bonds with the face value of $100, and at the same time, she has also taken a long exposure in call options with the strike price of $100. Which of the following accurately depicts Smith's strategy?

A. Smith has constructed a put-call parity.

B. Smith has constructed a covered call.

C. Smith has constructed a fiduciary call.

D. Smith has constructed a protective put.

Q.755 Johanna Smith is a treasury manager at Easy Bank. She manages the treasury affairs and also the investment advisory activities of the bank. She invests in treasury and money market instruments to manage short-term cash, but for long-term cash management, she uses other instruments. Currently, she has invested in a zero-coupon bond with the face value of X, and at the same time, she has also taken a long exposure in call options on the stocks of a specific firm with the strike price of X. Suppose that at the time of expiration of the call options, the final price of the stock is A, which is below X. If the bond matures on the options expiration date, then estimate the payoff of the combination of the bonds and call options.

A. The payoff is A

B. The payoff is X

C. The payoff is A+X

D. The payoff is zero

Q.756 An investor is testing the relationship of a put-call parity for which he has constructed a fiduciary call and a protective put. His fiduciary call consists of a Millers Corp. zero-coupon bond with a face value of $95 and the bond is expected to mature in March 2017, and a call option on Millers Corp.'s common stock with the strike price of $95 and the option expiring in March 2017. Suppose that in March 2017, the current price of the stock is $90, then what is the total cash inflow that the investor will receive at maturity?

A. $90

B. $95

C. $100

D. $185

Q.757 The put-call parity is an important relationship in options pricing. The put-call parity relationship is established on the payoff of the combination of two portfolios, a fiduciary call, and a protective put. The fiduciary call is composed of a risk-free discount bond and a call option, while the protective put consists of a put option and a stock. Which of the following principle must hold true in the put-call parity?

A. The face value of the discount bond must be below the strike price of call and put options.

B. The face value of the discount bond must be above the strike price of call and put options.

C. The face value of the discount bond must be equal to the final price of call and put options.

D. The face value of the discount bond must be equal to the strike price of call and put options.

Q.758 Vijay Mehta is a portfolio manager at First American Investments. He manages a portfolio that invests in a wide variety of financial instruments. Currently, a large portion of his portfolio consists of stocks and options. Recently, he purchased the stock of Jack Ville Inc. and at the same time, he also took a long exposure in a put option on the stocks of Jack Ville Inc. with the strike price of X. Suppose that, at the time of expiration, the final price of the stock, S, is below the strike price, X, then estimate the payoff of the combination of the stock and the put option.

A. The payoff of the combination of the stock and the put option is S.

B. The payoff of the combination of the stock and the put option is X.

C. The payoff of the combination of the stock and the put option is S+X.

D. The payoff of the combination of the stock and the put option is zero.

Q.760 The put-call parity relation suggests that the portfolios with identical payoffs must sell for the same price in order to prevent arbitrage profit or riskless gains. The put-call parity is, therefore, constructed of the fiduciary call and protective put options. Which of the following equation is inconsistent with the put-call parity equation?

A. $S = c - p + X(1+r)^{-t}$

B. $p = c - S + X(1+r)^{-t}$

C. $X(1+r)^{-t} = S + c - p$

D. $c = S + p - X(1+r)^{-t}$

Q.761 Jacob Clarke is an investment manager at one of the largest investment banks in Canada. Clarke has a wide variety of investment options to invest in. However, he is interested in constructing the payoff of a synthetically created long position in call options. Which of the following positions should he take to create the payoff of a synthetic call option?

A. Long a stock, short a put option, and short a zero-coupon bond.

B. Long a call option, short a put option, and short a zero-coupon bond.

C. Short a stock, long a put option, and long a zero-coupon bond.

D. Long a stock, long a put option, and short a zero-coupon bond.

Q.763 Giana Greg, a Slovakian consultant, has recently graduated in finance from one of the well-known business schools of Bratislava. She is now an independent consultant that provides trading strategies in stocks and derivatives to individuals and corporations. While replying to an email from one of her clients regarding the put-call parity, she stated the following:
I. The put-call parity is constructed when the strike price and the time to maturity of the put and call options are equal.
II. Puts and calls must be American-style for the put-call parity relationship to hold true.

Which of the abovementioned statement(s) is/are inconsistent with the put-call parity relationship?

A. Only statement I is incorrect.

B. Only statement II is incorrect.

C. Both statements are incorrect.

D. None of the statements are incorrect.

Q.3413 A stock is currently trading at $60 per share. A European call option having an exercise price of $71 and one year to maturity is currently trading at $10. If the risk-free rate is 7%, per annum, then what is the put option price?

A. $3.80

B. $16.36

C. $16.20

D. $5.06

Q.3514 Rabi Koch took a long position in a March put option with the strike price of $65. What is the outcome of the position if the spot price is $78 at expiration?

A. $11 positive payoff

B. $13 negative payoff

C. $13 positive payoff

D. $0 payoff

Q.3564 Which of the following conditions will create the biggest discrepancy in price between a long-term European put option and 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

D. Both A and B

Q.3565 The value of a European put option will increase with higher:

A. Volatility

B. Carrying costs

C. risk-free interest rates

D. Both A and C

Q.3566 Which of the following is NOT a factor that determines the value of an option?

A. The price of the underlying asset

B. The volatility of the underlying asset

C. The inflation rate

D. The interest rate

Q.3567 Which of the following conditions will increase the value of a call option?

A. A decrease in volatility

B. An increase in risk-free rate

C. A decrease in stock price

D. An increase in the dividend rate

Q.3568 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 accurate regarding her decision to:

A. Purchase call options

B. Purchase put options

C. Buy the underlying short

D. All of the above

Q.3569 According to the put-call parity, a long position in a put option can be replicated by going:

A. Short a call option, short the underlying, and long a risk-free bond

B. Short a call option, long the underlying, and short a risk-free bond

C. Long a call option, short the underlying, and short a risk-free bond

D. Long a call option, short the underlying, and long a risk-free bond

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Q.3570 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

D. $8.48

Reading 38: Trading Strategies

Q.765 Mahesh Kumar has recently joined Singapore Standard Bank, the largest investment banks in South-East Asia. Kumar has analyzed an open position his bank has in the stock of a Singaporean carmaker. The current value of the stock is $44, but he believes that the price of the stock will have trouble reaching above $48 because of technical and fundamental factors. Kumar called one of the bank's traders and shared his analysis regarding the stock. The analyst informed the manager that he is going to lock the profit with a covered call strategy.
How exactly is he going to apply the covered call?

A. Since the bank already owns the stocks, the trader is going to buy out-of-the-money call options at the strike price of $48.

B. Since the bank already owns the stocks, the trader is going to sell in-the-money call options at the strike price of $44.

C. Since the bank already owns the stocks, the trader is going to buy at-the-money call options at the strike price of $44.

D. Since the bank already owns the stocks, the trader is going to sell out-of-the-money call options at the strike price of $48.

Q.766 Investments banks create customized derivative products for risk-averse retail investors. These products have features of multiple instruments. The payoff on these customized products depends on underlying assets like stocks, indices, and other risky assets. However, the investments in these assets cannot decrease below the initial principal. Which of the following products have these features?

A. Covered call

B. Protective put

C. Principal protected notes

D. Straddle notes

Q.767 John Greenwood has recently joined A.K.K. Investment Company as a junior investment analyst. Greenwood has very little past experience in trading options. Therefore, he frequently has to refer to his superiors for trading strategies and terminologies. Recently Greenwood was instructed to apply a bull spread strategy on Blue Balloon Corp. stock options. Which of the following transactions correctly depicts the bull spread strategy?

A. Taking a long position in a European put option with a specific strike price and simultaneously taking a short position in a European call option with a higher strike price

B. Taking a long position in a European put option with a specific strike price and simultaneously taking a short position in a European put option with a lower strike price

C. Taking a long position in a European call option with a specific strike price and simultaneously taking a short position in a European call option with a higher strike price

D. Taking a long position in a European call option with a specific strike price and simultaneously taking a short position in a European call option with a lower strike price

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Q.768 An investment manager at Skyline Bank frequently invests in stocks and derivatives. He is always testing different options strategies to maximize the value of the assets under management. Recently, he applied a bull spread strategy on Ocean Shipping Co. stock options. The manager applied a strategy by purchasing European call options on the stock of the firm with a strike price of $89, and at the same time, he sold European call options on the same stocks with a strike price of $92. Suppose that the final price of the stocks at expiration is $97, then estimate the payoff of the strategy. Ignore the cost of the strategy.

A. $8

B. $5

C. $3

D. -$2

Q.769 Saddam Ahmed is a junior portfolio manager at Westend Investments. His investing activities are focused on equities and options. Recently, he purchased a 6-month European call option on a specific stock for $5 with a strike price of $110. At the same time, he sold a 6-month European call option on the same stocks for $3 with a strike price of $115. Suppose that the final price of the stock at expiration is $113, then estimate the profit/loss of the strategy.

A. -$2

B. $1

C. $3

D. $6

Q.770 Nancy Smith is an independent individual investor. She has 5 years of experience trading equities, bonds, and options. Smith has recently learned about spread strategies in options that could be implemented to earn protected profits. She is particularly interested in implementing the bear spread strategy. Keeping in view Smith's intended spread strategy, determine how she can implement the bear spread strategy.

A. She can implement the bear spread strategy by buying a European put option with a specific strike price and simultaneously selling a European put option with a higher strike price.

B. She can implement the bear spread strategy by selling a European put option with a specific strike price and simultaneously buying a European put option with a higher strike price.

C. She can implement the bear spread strategy by buying a European put option with a specific strike price and simultaneously buying a European call option with a lower strike price.

D. She can implement the bear spread strategy by selling a European put option with a specific strike price and simultaneously buying a European put option with a lower strike price.

Q.771 Ahmet Gogh believes the price of the stocks of Red Bus Co. has more downside potential than upside potential. Therefore, he has purchased a European put option on the stock of Red Bus with a strike price of $42 and simultaneously sold a European put option with a strike price of $38. At expiration, the final price of the stock is $43.What is the payoff of the strategy?

A. $0

B. $1

C. $4

D. $5

Q.772 During a trader's brainstorming session on the subject of spread trading strategies in options trading, a senior trader and trainer made the following statements regarding the definition and payoffs of a box spread strategy:
I. A box spread strategy is the combination of a bull spread strategy and a bear spread strategy
II. The payoff of the box spread strategy will always be the difference between the higher strike price and the lower strike price (X2-X1)

Identify the incorrect statement(s).

A. Only statement I is incorrect.

B. Only statement II is incorrect.

C. Both statements are incorrect.

D. None of the statements are incorrect.

Q.773 Phillip Harris is a senior arbitrageur investor at Dynamic Arbitrage Investment Co. He recently found out that if the value of a box spread is not equal to the present value of the payoff of the box spread, an investor could earn an arbitrage profit. He also found out that if the market value of a box spread is too high, it is profitable to sell the box spread.What positions should Harris take in call and put options to sell a box spread?

A. Harris must buy a European call option and buy a European put option with a specific strike price (X1), and simultaneously sell a European call option and sell a European put option with a higher strike price (X2).

B. Harris must sell a European call option and sell a European put option with a specific strike price (X1), and simultaneously buy a European call option and buy a European put option with a higher strike price (X2).

C. Harris must buy a European call option and sell a European put option with a specific strike price (X1), and simultaneously sell a European call option and buy a European put option with a higher strike price (X2).

D. Harris must sell a European call option and buy a European put option with a specific strike price (X1), and simultaneously buy a European call option and sell a European put option with a higher strike price (X2).

Q.775 A Masters of Science (M.Sc.) in Finance graduate, who is also a teacher's assistant, is helping undergraduate students prepare for their final exams. In today's lecture, he is giving a presentation on spread trading strategies using options. He presented that, in a butterfly spread trading strategy, investors take positions in three options. He also makes the following statements regarding the payoff of butterfly spreads:
I. If the current price of the stock is less or equal to the strike price, X_1 then the payoff from a long put is equal to the difference between the strike price, X_1 and the current price, S_T. In other words, if $S_T \leq X_1$, then Payoff $= X_1 - S_T$.

II. If the current price of the stock is greater than the strike price, X_3, then the payoff from a long put is equal to the difference between X_3 and the current price, S_T. In other words, if $S > X_3$, then Payoff $= X_3 - S_T$

Which statement(s) is/are correct?

A. Statement I only

B. Statement II only

C. Both statements

D. None of the statements

Q.776 An investor is interested in a spread trading where he can sell a European call option and buy a European call. If the investor wishes for the expiration date of the long call to be greater than the short call, then which of the following is the strategy he is interested in?

A. Bull spread

B. Bear spread

C. Butterfly spread

D. Calendar spread

Q.777 A calendar spread is a spread trading strategy in which an investor can invest in two positions in European call options with the same strike price and different expiration dates. Following are features of calendar spreads:
I. To create a calendar spread with put options, an investor must buy a long-maturity put option and sell a short-maturity put option
II. A bullish calendar spread involves a higher strike price than the current stock price, whereas a bearish calendar spread involves a lower strike price

Which of the following statements is/are correct?

A. Statement I is correct only.

B. Statement II is correct only.

C. Both statements are correct.

D. None of the statements is correct.

Q.778 A hedge fund manager sent a quarterly newsletter to its clients via email, which contained information on the earnings and the strategies used by the manager throughout the quarter. One of the clients inquired about the straddle combination strategy used in trading and asked for details. The manager of the fund replied to the email with the following explanations of the straddle trading strategy:

I. In a straddle options trading strategy, the investor buys European call and put options with the same strike prices and expiration dates

II. The straddle trading strategy is used when a big movement in stock price is expected, but the direction of the movement is unknown

Which of the explanatory statements is/are wrong?

A. Statement I is wrong.

B. Statement II is wrong.

C. Both statements are wrong.

D. None of the statements are wrong.

Q.779 Suppose an individual investor has implemented a straddle trading strategy. The investor purchased a 6-month European call option with a strike price of $58 on the stock of a specific firm for $5, and simultaneously purchased a 6-month European put option on the stock of the same firm for $4 with a strike price of $58. If the current price of the underlying stock is $65, which of the following is closest to the profit of the straddle strategy?

A. $7

B. $0

C. -$2

D. -$9

Q.780 Irene Schmidt has recently joined the Hessen Investments Company based in Frankfurt, which largely invests in equities and options. Since Schmidt is new to derivatives trading strategies, she has created a chart that explains options trading strategies. After analyzing the chart, determine the incorrectly represented strategy.

Option Strategy	Strike price of calls and puts	Expiration date of calls and puts
Bull spread strategy	Different	Same
Butterfly spread strategy	Different	Same
Calendar spread Strategy	Same	Different
Diagonal spread strategy	Same	Different

A. The bull spread strategy is incorrect.

B. The butterfly spread strategy is incorrect.

C. The calendar spread strategy is incorrect.

D. The diagonal spread strategy is incorrect.

Q.781 An investor has recently learned about spread trading strategies. To test one of the spread combinations, the investor purchased a 3-month European call option on stocks of Big Corp. with a strike price of $101. At the same time, he also took a long position in two 3-month European put options on the stocks of Big Corp. with a strike price of $101. Which of the following strategies is he most likely testing?

A. Straddle strategy

B. Butterfly strategy

C. Strap strategy

D. Strip strategy

Q.782 An investment manager has realized that there is a great potential for profits in the options market without tying up much capital. To test the potential of options trading, he implemented a spread strategy by purchasing two 6-month European call options on stocks of a specific firm with the strike price of X and, at the same time, buying a 6-month European put option on the stocks of the same firm with the same strike price.
Which strategy is he most likely using?

A. Straddle strategy

B. Strip strategy

C. Strap strategy

D. Strangle strategy

Q.783 An investment manager has realized that there is a great potential for profits in the options market without tying up much capital. To test the potential of options trading, he implemented one of the spread strategies by purchasing a 9-month European call option on the stocks of Petro Co. with a strike price of $37, and at the same time, buying a 9-month European put option on the stocks of the same firm with a strike price of $32.
Which of the following strategies is the investment manager most likely testing?

A. Calendar spread strategy

B. Straddle strategy

C. Strip strategy

D. Strangle strategy

Q.4623 A portfolio X consists of a five-year zero-coupon bond and a five-year call option on portfolio Y. The current price of portfolio Y is $20,000, and the strike price of the option is also $20,000. The interest rate is 7% per annum. To ensure no losses to a trader while still providing the trader with room for profits, the premium paid to secure the call option should cost less than:

A. 20000

B. 5740.28

C. 15740.28

D. 14259.72

Q.4624 With respect to interest rates, when are Principal Protected Notes (PPNs) most profitable?

A. When interest rates increase

B. When interest rates decrease

C. When interest rates remains constant

D. When interest rates are volatile

Q.4625 The strike price of a three-month call and a three-month put option with the same time to maturity is $50. The cost of the call option is $4, whereas the cost of the put option is $6. Using a short straddle strategy of trading, by how much should the asset price move in order to incur a loss?

A. 4

B. 6

C. 2

D. 10

Q.4626 Consider two call options with strike prices of $30 and $35 and two put options with strike prices $30 and $35. How can a trader create a bear spread trading strategy using two options?

A. Buy the put option with a strike price of $30 and sell the put option with a strike price of $35.

B. Buy the put option with a strike price of $35 and sell the put option with a strike price of $30.

C. Buy the put option with a strike price of $30 and sell the call option with a strike price of $35.

D. Buy the put option with a strike price of $35 and sell the call option with a strike price of $30.

Q.4627 Consider two call options with strike prices of $30 and $35 and two put options with strike prices of $30 and $35. How can a trader create a bull spread trading strategy using two options?

A. Buy the call option with a strike price of $30 and sell the call option with a strike price of $35.

B. Buy the call option with a strike price of $35 and sell the call option with a strike price of $30.

C. Buy the put option with a strike price of $30 and sell the call option with a strike price of $30.

D. Buy the put option with a strike price of $35 and sell the call option with a strike price of $35.

Q.4873 An investor creates a bull put spread by purchasing a put option for a premium of $25. The put option comes with a strike price of $95 and expires in July 2022. At the same time, the investor sells a put option for a premium of $50. The put option comes with a strike price of $140 and expires in July 2022. The underlying asset is the same and is currently trading at $145.
Determine the maximum loss.

A. 40

B. 20

C. 25

D. 15

Q.4912 Peter creates a bear spread using put options with strike prices of USD 35 and USD 40 with the same time to maturity. The options cost USD 3 and USD 5, respectively under what circumstances will Peter make a profit?

A. If the asset price is less than 40.

B. If the asset price is less than 38.

C. If the asset price lies between 38 and 40.

D. If the asset price is greater than 38.

Q.4913 Hassan intends to create a bull spread on put options on an asset with strike prices of USD 20 and USD 25 and the same time to maturity. The options cost USD 2 and USD 2.5, respectively. How can Hassan create the intended bull spread?

A. Buying the option with a lower strike price and simultaneously selling the put option with a higher strike price.

B. Buying the option with a higher strike price and simultaneously selling the put option with a lower strike price.

C. Buying the option with a lower strike price, and at the same time, buying the put option with a higher strike price.

D. None of the above.

Q.4914 Suppose a strangle is created from a call option with a strike price of USD 35, which costs USD 1, and a put option with a strike price of USD 20, which costs USD 2. The two options have the same time to maturity. What is the profit as a function of the asset price, S_T at option maturity, when $S_T \leq 20$?

A. 0

B. $17 - S_T$

C. -3

D. $S_T - 38$

Q.4915 A straddle is created from a call and a put with the same strike price of USD 45. If the options have the same time of expiration and that the cost of setting up the straddle is 5, what conditions will lead to a profit on the straddle?

A. If $S_T > 50$ or if $S_T < 40$

B. If $S_T < 40$

C. $S_T < 10$

D. $10 < S_T < 50$

Reading 39: Exotic Options

Q.784 Susanne Alexander is a junior investment analyst at JCB Investment Bank in Tokyo. She is no prior experience in trading equities and derivatives. She has been assigned to the trading unit of the bank where she is taking her initial training from the senior management of the trading unit. In one of the training sessions, she was asked to identify the option that most likely trades in the over-the-counter options market. Identify for Alexander the correct option.

A. Plain vanilla options

B. Covered calls

C. European options

D. Exotic options

Q.785 In the valuation of exotic options, the yield on the underlying asset must be taken into considerations. The yield on the underlying assets is present in different forms and variables for different options. For instance:
I. In the valuation of exotic options on stock indices, the yield is set equal to the dividend yield on the index
II. In the valuation of exotic options on currencies, the yield is set equal to the domestic risk-free rate
III. In the valuation of exotic options on futures, if the domestic currency is the base currency, then the yield would be the domestic risk-free rate

Which of these yield measures is incorrect?

A. The yield measure on exotic options on stock indices is incorrect.

B. The yield measure on exotic options on currencies is incorrect.

C. The yield measure on exotic options on futures is incorrect.

D. None of the exotic options have incorrect yield measures.

Q.786 Ryan Holland is an options trader that uses standard European calls, standard European puts, forward contracts, cash, and the underlying asset to create exotic options known as packages. He believes that range forward contracts have the following features. Determine which of these features are correct.

I. A range forward contract is created with a long call and a short put or a short call and a long put

II. In the case of the long call and the short put, the call strike price is greater than the put strike price

III. The combination of costs from the two positions typically nets to zero

A. Features I and II are correct.

B. Features II and III are correct.

C. Features I and III are correct.

D. Features I, II, and III are correct.

Q.787 Ganesh Singh is a junior options trader at an Indian brokerage house. He was recently promoted from the equity division to the derivatives unit of the firm. One of her clients asked Singh to take a long position on his behalf in a Bermudan option. Since Singh is unfamiliar with Bermudan options, describe the unique feature of these types of options.

A. A Bermudan option is a non-standard European option, which can be exercised any time until its expiration.

B. A Bermudan option is a non-standard American option, which can be exercised any time until its expiration.

C. A Bermudan option is a non-standard European option, which can only be exercised at certain dates until its expiration.

D. A Bermudan option is a non-standard American option, which can only be exercised at certain dates until its expiration.

Q.788 Some of the exotic options that are created by brokers and traders are created with non-standard American style options that can be exercised at any time until expiration. These options trade in over-the-counter markets. Which of the following features are unlikely present in non-standard American options?

A. These options can have the features of both American and European options, which allows them to be exercised only at certain dates until their expiration.

B. These options may be allowed to exercise early.

C. The strike price of non-standard American options may change during the life of the option.

D. These options have a lockout feature, which means these options can not be used in combination with other options.

Q.789 A gap option is a non-standard option that is created with a European call option. However, the European call option used in the construction of a gap option is different from the regular European call option. Which of the following is the accurate difference between a gap European call option and a regular call option?

A. A gap option has two strike prices i.e. X1 and X2 (where X2 > X1). When the final stock price is greater than X2 (S>X2), the payoff of the gap call option is S – X1.

B. A gap option has two strike prices i.e. X1 and X2 (where X2 > X1). When the final stock price is greater than X2 (S>X2), the payoff of the gap call option is S – X2.

C. A gap option has two strike prices i.e. X1 and X2 (where X2 > X1). When the final stock price is greater than X1 (S>X1), the payoff of the gap call option is S – X1.

D. A gap option has two strike prices i.e. X1 and X2 (where X2 > X1). When the final stock price is greater than X1 (S>X1), the payoff of the gap call option is S – X2.

Q.790 Hannah Bruce is a derivatives investment adviser at Dot Investments in New York. She provides advisory services to retail as well as institutional investors. One of her clients, a small size community insurance company, intended to invest in equities option that starts at some future date and expires at an expiration date further in the future. Which of the following options should Bruce recommend?

A. A European gap option

B. An employee option

C. A futures option

D. A forward start option

Q.791 Gabriela Clarke is a senior derivatives investment manager at one of the largest investment banks in London. She specializes in constructing complex exotic options for her clients. Currently, she is investing in a series of call options with a strategy in which she purchases an option with the strike price of K and expiry date of T1. She then invests in another option that starts at T1 and expires at T2. This option will have a strike price equal to the price of the underlying at T1. She invests in many such options with the same strategy, where one option starts as the last option expires. The series of such options is called a:

A. Cliquet option

B. Gap option

C. Forward start option

D. Futures option

Q.792 Jiao Bu is a Chinese retail investor who has recently moved to the United States. Bu mistakenly invested in an exotic option that has two strike prices and two exercise dates. On the first exercise date T1, Jiao is entitled to pay the first strike price of X1 and receive a call option, which will give her the right to purchase the underlying asset for the second strike price of X2 on the second exercise date T2. In which of the following exotic options has she mistakenly invested?

A. Compound option

B. Cliquet option

C. Forward start option

D. Barrier option

Q.793 Compound options are exotic options in which the holder of the option has an option on the option. The following are the features of compound options. Which of these features are inconsistent with compound options?

I. Compound options are of four types, i.e., call on call, call on put, put on put, and put on call

II. Compound options have the same strike price, but two expiration dates

III. The holder of a call on a call only purchases a plain vanilla option if, on the first expiration date T1, the price of the stock is greater than the first strike

A. Feature I is inconsistent with the definition of compound options.

B. Feature II is inconsistent with the definition of compound options.

C. Feature III is inconsistent with the definition of compound options.

D. None of the features are inconsistent with the definition of compound options.

Q.794 Adam McGill is a hedge fund manager who is interested in purchasing an exotic option on the stock of Turkish Airlines stocks. Turkey is currently holding a referendum and the referendum results will either have a significantly positive or negative impact on the tourism industry as well as the Turkish Airlines stocks. Since Adam is not sure about the direction of the prices of the stocks, he intends to purchase an option that gives him the right to decide if the option is a call or a put at a specific date. Determine which of the following options is suitable for him.

A. Call on call compound option

B. Chooser option

C. Ratchet option

D. Forward start option

Q.795 A recent M. Sc. Finance graduate made the following two statements:
I. The down-and-out call option is a knock-out type of barrier option in which a regular call option comes in existence when the price of underlying asset reaches a specific lower barrier which is below the initial asset price.
II. The down-and-in call option is a knock-in type of barrier option, which ceases to exist as soon as the price of the underlying asset reaches a specific lower barrier.

Which of the following is correct?

A. The definition of the down-and-out call knock-out option is incorrect.

B. The definition of the down-and-in call knock-in option is incorrect.

C. The definition of the down-and-out call and down-and-in call options are both incorrect.

D. Neither the down-and-out call nor the down-and-in call options definitions are incorrect.

Q.796 A type of barrier option in which a regular put option on the underlying asset comes into existence when the price of the underlying asset reaches a specific barrier, which is set equal to or above its initial level is called a:

A. Down-and-in put option.

B. Down-and-out put option.

C. Up-and-in put option.

D. Up-and-out put option.

Q.798 Hakim Ahmed is a junior derivatives trader who has recently started trading exotic options. A week ago, he purchased an exotic option that pays off nothing if the price of the underlying asset reaches above the strike price at a predetermined date and pays a fixed amount if the underlying asset price reaches below the strike price. Which of the following options has he purchased?

A. Asset-or-nothing call binary option.

B. Asset-or-nothing put binary option.

C. Cash-or-nothing call binary option.

D. Cash-or-nothing put binary option.

Q.799 In which of the following exotic options is the payoff the final current price of the asset minus the minimum or lowest asset price that the underlying asset has achieved during the life of the option?

A. Floating lookback call option.

B. Floating lookback put option.

C. Fixed lookback call option.

D. Fixed lookback put option.

Q.801 Katja Firos is an investment analyst at Frankfurt Securities, a brokerage and investment company. She was instructed by the head of the investments unit to hedge the portfolio of exotic options through static options replication. Which of the following steps should she take to implement the static replication method?

A. The static replication method involves searching for a portfolio of the same exotic options which other market participants are using for hedging.

B. The static replication method involves searching for a portfolio of actively traded options with opposite attributes that inversely replicates the exotic options and then taking a short position in this portfolio in order to hedge the exotic options.

C. The static replication method involves searching for a portfolio of actively traded options with similar attributes that approximately replicates the exotic option and then taking a short position in this portfolio in order to hedge the exotic options.

D. The static replication method involves searching for a portfolio of similar exotic options with similar attributes and then taking a long position in this portfolio in order to hedge the exotic options.

Q.802 Exotic options are customized and designed to meet the requirements of investors, which is why these options trade on OTC markets. These options have features that allow them to change the expiration date and strike prices. Forward start options are also non-standard options that allow the investor to purchase an option that will start at a future date. Which of the following options is most similar to a forward start option?

A. Warrants

B. Butterfly spread options

C. Gap options

D. Employee options

Q.803 Which of the following mentioned options is NOT referred to as a series of call or put options with a strategy in which numerous options are purchased?

A. Cliquet option

B. Ratchet option

C. Barrier options

D. Strike reset option

Reading 40: Properties of Interest Rates

Q.645 Donald Gregg is a senior professor of economics at the University of Vikings. He has authored various books on the subject of macroeconomics, financial instruments, and derivatives. He is famous for conducting a bi-yearly informative seminar where he delivers his analysis on finance-related topics. In his last seminar, he said that the government also borrows funds from public institutions in exchange for their guarantee to return the funds with interest. These transactions are considered risk-free as governments are not likely to default. Which of the following rates do governments use to borrow funds denominated in their own currency?

A. LIBOR.

B. Fed funds rate.

C. Repo rate.

D. Treasury rate.

Q.646 Franky Johnson is a junior trader at the Beijing office of a large German investment bank. He is an Ivy League graduate and brings with him very little experience in derivatives trading. Today, he is instructed by his investment team to purchase the floating vs. floating interest rate swaps in the derivatives markets. Which of the following rates is he most likely to use to value a floating interest rate swap?

A. LIBOR.

B. Fed funds rate.

C. Repo rate.

D. Treasury rate.

Q.647 Since the LIBOR rate is composed of estimates, not actual rates, it has been seen in recent years that the banks were involved and sanctioned for manipulating the LIBOR rate. An excerpt from a newspaper reads:

"As the LIBOR rates are published on the basis of the estimates provided by banks, the traders at some of the larger banks conspired to provide inaccurate rates in order to manipulate the average of rates used for the LIBOR."

One of the analysts at a local business news channel suggested the following two factors for the manipulation of the LIBOR:

I. One motive for banks to manipulate the LIBOR was to make exceptional profits on instruments like interest rate swaps, whose cash flows depend on the LIBOR.

II. Another factor that motivated banks to manipulate the LIBOR downward is that if the LIBOR is lower, then the reserve requirement for the banks is also lower and the banks have more funds to invest.

Which of the factors for the banks to manipulate the LIBOR is/are correct?

A. Only factor I is a correct factor that motivated banks to manipulate the LIBOR.

B. Only factor II is a correct factor that motivated banks to manipulate the LIBOR.

C. Both factors motivated banks to manipulate the LIBOR.

D. None of the factors motivated banks to manipulate the LIBOR.

Q.648 Xiaojun Lee is the treasury manager at the Atlanta Small Business Bank. She works in a team that supervises all the branches of the banks in Atlanta. Her core responsibility is to look after treasury transactions and to make sure the bank, at all time, meets its reserve requirements with the Federal Reserve. Today, Lee has analyzed that the bank will fall short $200 million from its reserve requirements. In order to avoid penalties, the bank must borrow some funds from another bank. Which of the following rate must Lee use as the reference rate for borrowing $200 million overnight?

A. Treasury rate.

B. Fed funds rate.

C. Repo rate.

D. None of the above.

Q.649 Mohan Das is the treasury manager of a bank based in Frankfurt. He is responsible for looking at the bank's treasury operations and the compliance unit of the bank closely supervises his department. Today, Das is informed by the front office that the bank has to disburse a large fund to an institutional client which they believe will affect the bank's reserves with the central bank. The management suggested borrowing the funds from another bank to meet the central bank's reserve requirements, but he argues that the bank, instead, should sell its securities to another bank with the promise to purchase the securities back at a higher price. Which of the following interest rates is the manager most likely to use for the given transaction?

A. LIBOR.

B. Fed funds rate.

C. Repo rate.

D. Treasury rate.

Q.650 Gamze Goc is an independent wealth advisor that focuses on providing investment and savings advice to professionals. She advised one of her clients to invest $10,000 for 5 years into a government's national saving plan which pays a monthly interest of 8% per year. This rate is fixed regardless of the tenure of the investment. Since the client does not have an alternative option to invest his savings, he asked what interest rates he would earn if the rate was compounded continuously. Identify the most appropriate answer to the client's inquiry.

A. The continuously compounded interest rate is 9.23%.

B. The continuously compounded interest rate is 8.33%.

C. The continuously compounded interest rate is 8.05%.

D. The continuously compounded interest rate is 7.97%.

Q.651 Ahmed Hatti is an undergrad business and finance student at the University of Millennials. Along with his friend, he manages a small hypothetical fund from his dorm room. The fund consists of small investments from his colleagues and family. As a fund manager, he is also responsible for generating a quarterly income newsletter, which he has to email to all fund contributors.
Recently, Hatti decided to invest a small portion of his fund into an interest-bearing account that quotes an interest rate of 16% compounded continuously. In order to add the interest rate into the quarterly newsletter, he must convert the continuously compounded rate into a quarterly compounded rate. Which of the following is the most appropriate conversion of the rate?

A. The quarterly compounded rate is 15.6%.

B. The quarterly compounded rate is 16%.

C. The quarterly compounded rate is 16.3%.

D. The quarterly compounded rate is 17.1%.

Q.652 A news anchor at a business TV channel made the following statements regarding bonds and their rates.
Statement I: Zero rates are the appropriate discount rates that are used for discounting a single cash flow at a particular future time or maturity. Zero rates correspond to zero-coupon bond yields.
Statement II: A bond's yield, also known as spot rate, is the unique discount rate that, if applied to all cash flows, makes the bond price equal to its market price.
Statement III: The par yield is the coupon rate that, if applied, makes the price of a bond equal to its par value.

Which of the statements are correct?

A. Statements I and II are correct

B. Statements II and III are correct

C. Statements I and III are correct

D. Statements I, II, and III are correct

Q.653 An investor has invested $1,000 in a 7-year zero-coupon bond with continuous compounding. If the bond is quoted as 9% per year compounded continuously, then estimate the value of the investment at the end of 7 years.

A. The future value of a zero-coupon is $1,656.0.

B. The future value of a zero-coupon is $1,828.0.

C. The future value of a zero-coupon is $1,877.6.

D. The future value of a zero-coupon is $1,912.0.

Q.654 John Johnson works in the fixed-income investments department of Fast Asset Management, headquartered in London. Today, the head of the department asked Johnson to calculate the 6-month spot rates using the quotes of zero-coupon GILTs (UK Treasury bonds) provided in the table below.

Bond Principal (in GBP)	Time to Maturity (in year)	Bond Price
100	0.25	99.15
100	0.5	97.80
100	1	94.25

What is the semi-annual spot rate?

A. 0.0341

B. 0.0445

C. 0.0488

D. 0.0592

Q.655 The process by which traders can use the quotes of treasury bills and coupon-bearing treasury bonds to derive a zero-coupon yield curve or spot curve is referred to as:

A. Interpolation

B. Duration

C. Bootstrapping

D. Calibration

Q.656 Every year, thousands of students in Turkey take the Certified Trader exam. The exam tests in detail the knowledge of students who are willing to join the banking sector. In last year's exam, a question asked the students to calculate a 1-year forward rate 2 years from now. The question also provided the following table of zero spot rates p.a:

Year	Zero rates (per year)
1	6%
2	6.5%
3	7.2%

Using the information provided in the table, which of the following is the accurate 1-year forward rate 2 years from now?

A. 6.5%

B. 7.2%

C. 8.6%

D. 9.3%

Q.657 Beijing Shipping Corp. enters into a forward rate agreement with Geneva Bank to receive a 7% fixed rate on the principal of $50 million based on a three-month rate beginning in six-month time. If the three-month rate in six-month time is 6.8%, then what is the cash inflow/outflow for the Beijing Shipping at the end of the sixth month?

A. Cash outflow of $25,000.

B. Cash inflow of $24,582.

C. Cash outflow of $24,500.

D. Cash outflow of $24,582.

Q.658 A German bank and a French bank entered into a forward rate agreement contract where the German bank will pay a fixed rate of 4.2% compounded semiannually and receive the floating rate on the principal of €700 million. The forward rate between 0.5 years and 1 year is 5.1%. If the risk-free rate is 6% with continuous compounding, then which of the following is the true value of the FRA contract between the two banks?

A. €6,300,000

B. €6,143,344

C. €3,056,903

D. €2,966,558

Q.660 Hina Bibi is a fixed-income analyst at Vio Investment Company. She is responsible for analyzing the risk and return of a company’s portfolio of fixed income investments. She is analyzing the change in the price of a hypothetical 7-year bond with the face value of 100 and the price of 96.86. If the duration of the bond that she analyzing is 1.962, then which of the following options presents the accurate change in the price of the bond if the yield on the bond increases by 50 basis points?

A. The price of the bond will increase by $0.95

B. The price of the bond will decrease by $0.95

C. The price of the bond will increase by $0.98

D. The price of the bond will decrease by $0.98

Q.661 Matt Christian is a former equity trader who has recently lost his job due to the rise of algorithmic trading. Christian is aiming to change his focus from equity trading to fixed-income assets trading. He regularly educates himself by taking online seminars on fixed income assets and using demo accounts to trade bonds. During an online podcast, he heard the following definitions of duration:
I. The duration of a bond entails the average time it takes the holder to receive cash flows on the bond; it is the most suitable measure if the yield on a bond is continuously compounding.
II. Modified duration is a similar measure to duration but is more suitable when the yield on the bond is not continuously compounded.
III. Dollar duration is defined as the duration multiplied by the price of the bond.

Which of these statements is/are INCORRECT?

A. The definition of duration is incorrect

B. The definition of modified duration is incorrect

C. The definition of dollar duration is incorrect

D. More than one definition is incorrect

Q.662 There are different measures available that are used to measure the change in the price of the bond given the change in the yield curve. Which of the following measures is used for the purpose of estimating changes in bond prices if the changes in the yield curve are larger?

A. Duration

B. Convexity

C. Modified duration

D. Concavity

Q.663 Fredrick Hessen is a senior professor in the department of macroeconomics at Welth Business School. In the current semester, his course focuses on interest rates and the term structure of interest rates. One day, he made the following comment:
“There is no relationship between short-term, medium-term, and long-term interest rates. These interest rates are independently determined by the supply and demand in their specific bond market. For instance, the short-term interest rate is determined by the supply and demand of short-term bonds”.

Which of the following theories is associated with the professor’s comment?

A. Expectation theory

B. Market segmentation theory

C. Liquidity preference theory

D. None of the above

Q.664 Transactions worth billions of dollars depend on the shape of the zero rate curve. The shape of the zero curve has gained the attention of economists, mathematicians, and investors. Many theories exist that present their perspective about the shape of the zero curve. One of those theories suggests that investors are likely to invest their funds for a shorter period while borrowers are more willing to borrow the funds at long-term fixed rates. The theory also concludes that the forward rates are greater than the future spot rates, which justifies the empirical result that the yield curve tends to be upward sloping. Which of the following theories provides the above-mentioned conclusion?

A. Expectation theory

B. Market segmentation theory

C. Liquidity preference theory

D. None of the above

Q.3533 Stock IIK is currently selling for $80. The 28 analysts offering 12-month price targets for IIK have a median target of $91. Given that the stock reaches the median target of $91 in 12 months, what is the continuously compounded return of this asset?

A. 0.1375

B. 0.1198

C. 0.1319

D. 0.1288

Q.3534 An investor invested $154,856 into a mutual fund 5 years ago. If the investment is now worth $201,694, what is the compound annual growth rate of the investment?

A. 6%

B. 7.9%

C. 5.4%

D. 5.9%

Q.3535 A bank advertises that it pays an annual interest of 10% with semi-annual compounding on its savings account. What is the effective annual rate?

A. 10.375%

B. 10.25%

C. 10.5%

D. 10.42%

Q.3536 The price of a stock increases from $24 to $40 in two years. What is the continuously compounded annual return for the stock?

A. 43.10%

B. 28.00%

C. 51.08%

D. 25.54%

Q.3537 In order to have liquid cash at hand, a company always keeps $200,000 in its bank account. The stated annual interest rate quoted by the bank is 8%. Assuming that compounding is done continuously and there have been no withdrawals and additions, what is the balance in the company's bank account after one year?

A. $200,321

B. $216,657

C. $202,149

D. $217,985

Q.3538 Jose Calzon currently has $5,040.11 in his bank account. If he plans to buy a car for $5,500 next year, what is the annual interest rate (compounded monthly), that a bank must pay so that James receives a sum of $5,500 next year?

A. 0.76%

B. 9.12%

C. 0.73%

D. 8.76%

Q.3539 An investor received $100,000 after five years from a certificate of deposit which paid him an interest of 12% with monthly compounding. What is the sum deposited by the investor at the beginning of the 5 years?

A. $79,670

B. $55,045

C. $56,743

D. $68,856

Q.3540 A 3-year bond offers a 7% coupon rate with interests paid annually. Assuming the following sequence of spot rates, the price of the bond is *closest to*:

Time to Maturity	Spot Rate (%)
1	4
2	5
3	5.5

A. 102.48

B. 106.74

C. 103.56

D. 104.2

Q.3541 An analyst has gathered the following estimated series of spot rates for a developing country:

- 0.5-year: 2%
- 1-year: 3%
- 1.5-year: 3.55%
- 2-year: 4%
- 2.5-year: 4.5%
- 3-year: 5%
- 3.5-year: 5.45%

Given that the information is accurate, what is the price of a 3-year, 1,000 face value, 5% annual coupon paying bond?

A. 1115.3

B. 995.65

C. 1001.8

D. 998.51

Q.3542 The 2-period spot rate, S_2 is 9%, and the 1-period spot rate, S_1 is 4%. Calculate the forward rate for one period, one period from now, $f_{1,1}$.

A. 5%

B. 4.8%

C. 14.24%

D. 8.73%

Q.3543 If the current 1-year spot rate is 3%, the 1-year forward rate one year from today ($f_{1,1}$) is 4%, and the 1-year forward rate two years from today ($f_{2,1}$) is 5%, then the 3-year spot rate is *closest to*:

A. 4%

B. 12.5%

C. 4.2%

D. 8.42%

Q.3545 A corporate bond has the following characteristics:

- Price: USD 106.50
- Coupon rate: 5%
- Duration: 7.5 years
- Convexity: 101

If the credit spreads narrow by 175 basis points, then what will be the price of the bond?

A. USD 114.68

B. USD 122.13

C. USD 123.78

D. USD 117.68

Q.3548 You have been provided the following information on a bond:

Period	PV of cash flow (USD Mn)
1	3.7
2	4.9
3	22.3

If the yield to maturity is 6%, then what is the modified duration of the bond?

A. 2.45 years

B. 2.65 years

C. 2.30 years

D. 2.25 years

Q.3549 Calculate the expected percentage price gain (loss) from the following data:

- Reduction in yield-to-maturity: 20bps
- Annual modified duration: 23.657
- Annual convexity: 678.98

A. 4.86%

B. 4.59%

C. -4.6%

D. -4.9%

Q.3550 A 4-year semiannual corporate bond with a 3.5% coupon is priced at 104.12. This bond's modified duration and convexity are 3.75 and 45, respectively. The bond's credit spread narrows by 75 bps due to a credit upgrade. What is the estimated return impact without convexity adjustment?

A. 1.42%

B. 1.59%

C. 2.95%

D. 2.81%

Q.3551 A 4-year, 5% annual-pay bond has a face value of $1,000. The interest rate stands at 3% per annum.
Determine the approximate modified duration?

A. 0.97

B. 7.80

C. 3.62

D. 3.73

Q.3552 A bond has a duration of 10.62 and a convexity of 91.46. For a 200 bps increase in yield, what is the bond's approximate percentage price change?

A. -19.41%

B. -24.90%

C. -1.62%

D. -4.51%

Q.3553 A 9% bond has a full price of $905 and a YTM of 10%. Estimate the percentage change in the full price of the bond for a 30 basis point increase in YTM, assuming the bond's modified duration is 9.42, and its convexity is 68.33.

A. -2.65%

B. -2.83%

C. -2.80%

D. 2.83%

Q.3554 A bond valued at $200,000 has a duration of 8 and a convexity of 20. Assuming that the bond's spread relative to the benchmark curve increases by 25 basis points due to a credit downgrade, then what is the approximate change in the bond's market value?

A. $3,988

B. $3,960

C. $3,970

D. $3,368

Q.4821 The expectations hypothesis (theory) states that:

A. We can forecast future interest rates by looking at the term structure of interest rates since the return on a long-term bond is, in essence, the average return on short-term bonds over the same period.

B. We can forecast future interest rates by looking at past returns on similar instruments.

C. We can forecast future interest rates by looking at the behavior of the stock market.

D. We can forecast future interest rates by looking at the term structure of interest rates since the return on a short-term bond is essentially the average return on long-term bonds over the same period.

Q.4822 The annual yield of a one-year government bond is 10% and the expected yield on a one-year bond starting one year from now is 11.0%. The expected yield on a one-year bond starting two years from now is 11.5%. According to the expectations hypothesis, what would be the annual yield of a three-year government bond?

A. 36.14%

B. 12.04%

C. 11.04%

D. 10.83%

Q.4824 Which of the following is correct?

A. The interest rates on U.S. Treasury securities feature an embedded maturity premium primarily due to the fact that the probability of default is lower on long-term bonds than on short-term goals.

B. Assuming that the maturity risk premium is zero and the rate of inflation is expected to increase in the future, then the yield curve for U.S. Treasuries, other things held constant, exhibit an upward sloping yield curve.

C. According to the market segmentation theory, the yield curve should normally have an upward slope.

D. According to the liquidity preference theory, lenders generally prefer to lend on a long-term term basis in order to lock in a continuous stream of payments for an extended period.

Q.4825 Four U.S. T-bonds currently on the market have the following characteristics:

Price per $100 par value	Coupon (paid semiannually)	Maturity (yrs.)	Semiannual period
$101.50	5.0%	0.5	1
$102.60	5.25%	1.0	2
$103.15	5.75%	1.5	3
$103.95	6.20%	2.0	4

Determine the one-year spot rate via the bootstrapping method, assuming semiannual compounding.

A. 1.98%

B. 2.61%

C. 1.31%

D. 2.25%

Q.4826 The **main** advantage of the secured overnight financing rate (SOFR) over LIBOR is that:

A. It's based on the average borrowing rates across a larger collection of banks.

B. It's easier to compute.

C. It's based on actual observable transactions, not estimates.

D. It incorporates a built-in hedge against default risk.

Q.4902 Consider a bond whose current price is USD 150 with a cash flow in one year providing a present value of USD 50 and a cash flow in two years providing a present value of USD 100. Suppose further that a yield of 5% with semi-annual compounding applies on the bond. What is the value of modified duration?

A. 1.6667

B. 1.6260

C. 1.3333

D. 1.3008

Q.4903 What is the main limitation of duration?

A. Duration does not provide a good approximation in case the change in the bond yield arises from a non-parallel shift in the interest rate term structure or when the change being considered is large.

B. Duration does not provide a good approximation of the effect of a small parallel shift in the interest rate term structure.

C. Duration only applies when the change in interest rates is large.

D. None of the above.

Q.4904 Consider a portfolio that has a bond position worth USD 10,000. Suppose the position has a modified duration of 2 years and a convexity of 30. Assume that the term structure is flat. By how much does the value of the position change if interest rates increase by 15 basis points?

A. The position decreases by $30.

B. The position increases by $60.

C. The position increases by $30.

D. The position does not change.

Q.4905 Suppose the zero-coupon interest rates (semi-annually compounded) for maturities of 0.5, 1.0, and 1.5 years are 2.5%, 3.0% and 3.5%, respectively. Consider a USD 1,000 face value, two-year bond that currently trades at USD 1,060 and pays coupons at a rate of 6% per year every six months. If the two-year zero-coupon interest rate is R, what is the value of R?

A. 11.27%

B. 2.88%

C. 6.34%

D. 1.08%

Q.4908 In an FRA, an annual rate of 2% will be received, in exchange for a 6-month LIBOR to be paid on a principal of USD 2,000 for a six-month period starting in 15 months. If the six-month forward rate in 15 months is 2.5% per annum, what is the settlement on the FRA?

A. USD 4.94 is paid out

B. USD 12.35 is received

C. USD 4.88 is paid out

D. USD 4.94 is received

Q.4909 A three-year bond with a face value of USD 1,000 pays coupons of 8% per annum. The yield on the bond is 6% compounded annually. What is the Macaulay duration?

A. 1.0000

B. 2.6312

C. 2.7891

D. 2.7206

Q.4910 A three-year bond with a face value of USD 1,000 pays coupons of 8% per annum. The yield on the bond is 6% compounded annually. What is the Modified duration?

A. 2.6312

B. 2.7206

C. 2.7891

D. 1.0000

Q.4911 A three-year bond with a face value of USD 1,000 pays coupons of 8% per annum. The yield on the bond is 6% compounded annually. What is the modified convexity?

A. 7.6310

B. 8.0889

C. 2.7891

D. 7.1991

Reading 41: Corporate Bonds

Q.898 Judy Hamilton is a junior investment analyst in the fixed-income assets unit of Tulip Investments Company. The senior management of TIP has decided to post a free monthly investment recommendation list for the general public. Hamilton will be responsible for updating the monthly list of recommended corporate bonds and potential default bonds. The potential default bonds will have companies, which are considered in default based on specific criteria. Which of the following criteria is/are used to consider if a company is considered in default?
I. If the company is unable to pay the par value of the bond at maturity
II. If the company misses on its coupon payment on the bond
III. If the company is unable to maintain certain required ratios

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

Q.899 Joe George has recently joined the corporate trust department of Maximal Investment Bank based in New Jersey. George is an expert in performing the duties of a trustee. These functions include authenticating the bonds at the time of their issue, keeping track of the bonds sold and bonds outstanding, making sure that the issuer does not exceed the authorized principal, and making sure the issuer is maintaining required ratios. Which of the following parties does Joe George, a trustee, represent?

A. Bond issuer

B. Bondholder

C. Government

D. Independent rating agency

Q.900 Trustees are the corporate trust units of large banks that are representative of the interest of bondholders. From which of the following parties does the trustee receives fees for its services?

A. Governments

B. Bond issuers

C. Bondholders

D. They work independently

Q.901 Christopher Ray is a junior research analyst in the fixed-income unit of a mid-sized investment bank in the U.S. The fixed-income unit categorizes the bonds based on the type of issuers. These categories or issuer types are public utilities, transportations, industrials, banks & finance companies, and Yankees. The analyst is given the task to categories a bond issued by a German municipal government that has recently issued bonds in the U.S. to raise capital to finance a new kindergarten in the center of Frankfurt. In which category should this bond be classified?

A. Public utilities

B. Industrials

C. Yankees

D. Banks & Finance

Q.902 Which of the following statements are correct?
I. The debt maturity is the date on which the bond issuers satisfy their obligation under the bond indenture
II. The bond maturity date is the date on which the bond principal and the outstanding coupon are paid
III. The maturity date of the bond issue cannot be altered

A. Statements I and II are correct.

B. Statements II and III are correct.

C. Statements I and III are correct.

D. Statements I, II and III are correct.

Q.903 Which of the following should be used to calculate the coupon on a bond?

A. The coupon or interest is calculated on the price of the bond.

B. The coupon or interest is calculated on the amortized value of the bond.

C. The coupon or interest is calculated on the par value of the bond.

D. The coupon or interest is always fixed in dollar terms.

Q.904 The bonds that are issued in the United States are also classified on the basis of their interest rates. Which of the following types of bonds are always issued at a discount price?

A. Zero-coupon bonds.

B. Straight-coupon bonds.

C. Floating rate bonds.

D. Premium bonds.

Q.905 Linda Angola is a senior asset investment advisor at Bright Partners Co., an investment advisory firm based in Singapore. Angola is responsible for providing advisory services to a group of small-medium institutional clients. Jaguar Tires Co. is one of the largest clients of Angola and the management of the company intends to invest in a fixed income instrument that pays a fixed coupon at a specific date and also gets a share of the issuer's profit if the issuer earns profits above a certain threshold. Which of the following should Angola recommend to Jaguar Tires?

A. Differed-interest bonds.

B. Zero-coupon bonds.

C. Participating bonds.

D. Straight bonds.

Q.906 Muhammad Zubair is a retail bond investor that invests in various types of government and corporate bonds. On June 30, 2016, he purchased a 5-year zero-coupon bond for the price of $855. The bond was issued on July 1, 2014, at the discount price of $690 and the face value of the bond is $1000. Based on the given information, identify which of the following options is consistent with the definition of original issue discount (OID)?

A. In the given case, the original issue discount (OID) is the difference between $690 and $1000.

B. In the given case, the original issue discount (OID) is the difference between $690 and $855.

C. In the given case, the original issue discount (OID) is the difference between $855 and $1000.

D. In the given case, the original issue discount (OID) is the difference between the current amortized value and $1000.

Q.907 Sam Denis is a junior fixed-income analyst that is analyzing a number of corporate bonds to recommend to one of his clients. The bonds under analysis are classified by the type of issuers, type of risk, and expected return. Which of the following categories of bonds will have the lowest interests?

A. Corporate Bonds.

B. Debenture issues.

C. Mortgage bonds.

D. Straight-coupon discount bonds.

Q.909 Debentures are unsecured bonds issued by companies that do not have any pledge security or asset as collateral. While investors prefer secured bonds, the larger portion of bonds is dominated by debentures. Analyze and determine which of the following points regarding the rights of debenture holders is incorrect.

A. Debenture bondholders have a general claim on assets that are not pledged against secured debt.

B. Debentures are unsecured bonds; therefore, the debenture bondholders have no right over the assets of the issuer.

C. Debenture bondholders have a right to the pledged assets if the value of the pledge assets exceeds the claims of secured bondholders.

D. In absences of pledged assets or secured creditors, the claim of debenture bondholders is equal to the claims of other creditors.

Q.911 Ohio Automotive Inc. raised capital to finance its expansion into the SUVs market. A year ago, the firm issued a 4-year 6% semi-annual coupon bond. The bond has a special provision that allows the issuer to call its bond before the maturity of the bond. Which of the following options is consistent with the properties of a callable bond?

A. It is beneficial for the issuer to call the bond in an increasing interest rate environment.

B. It is beneficial for the issuer to call the bond in a decreasing interest rate environment.

C. It is beneficial for the bondholder if the bond is called in a decreasing interest rate environment.

D. It is beneficial for the bondholder if the bond is called in an increasing prices environment.

Q.912 Hauser Corp., a German portable house construction firm, is raising $500 million through 7-year 9% semi-annual coupon bonds. Classico Investment Company is interested in purchasing 33% of Hauser's total bond issue, but it has put forward a condition that requires the issuer to retire a portion of the principal of the debt each year until maturity rather than paying the whole capital at maturity. This condition is most likely associated with the:

A. Fixed-price call provision.

B. Make-whole call provision.

C. Sinking fund provision.

D. Tender offer provision.

Q.913 Matthias Schmidt is the Chief Financial Officer of Caribbean Shipping & Logistics Company. Three years ago, the company raised $600 million through 5-years 5% coupon bonds to finance its two new vessels that will sail in the Arabian Sea. Due to abrupt growth in emerging economies like Pakistan, Bangladesh, and India, the company grew exponentially in the last three years. The firm's senior management informed the CFO that they should retire the debt before maturity as the firm now has enough funds to pay for further expansions. If the indenture of the bond did not include any mechanism for early retirement in its indenture, then determine which of the following mechanisms could be used.

A. Fixed-price call provision.

B. Sinking fund provision.

C. Tender offer provision.

D. Replacement fund provision.

Q.914 Pamela Simpson is the fixed-income investment manager at the Nordend Investment Bank. During a seminar on the risks attached to the fixed income assets, which was organized to train junior analysts, Simpson made the following statements about the credit default risk of bonds:
I. Credit default risk is the risk of financial loss, or the underperformance of a portfolio, that arises due to movements in the credit spreads used in the marking to market of bonds
II. Investors rely on rating agencies to evaluate the credit default risk of the issuer
III. According to one of the rating agencies, a bond rated below B is a junk bond

Which of these statements is/are correct?

A. Statement I is correct only.

B. Statement II is correct only.

C. Statements I & III are correct.

D. Statements II & III are correct.

Q.915 Investors use default rates and recovery rates to forecast the non-investment grade bonds that have the potential to default or upgrade to investment grade. Which of the following options are least consistent with the properties of recovery rates?

A. Recovery rates are lower in an economic downturn.

B. Recovery rates are not based on the size of the bond issue.

C. Recovery rates are inversely correlated with default rates.

D. Recovery rates are lower in asset-intensive industries.

Q.916 Iron Partners Co. is a private equity firm that invests in distressed firms through various investment vehicles. Recently, the company acquired a mid-size paper manufacturing company through a leveraged buy-out (LBO). Initially, the equity firm acquired loans from commercial and investment banks to purchase the company. However, the company now issues bonds to pay off the debt of these banks. This activity of issuing debt to retire initial debt is called:

A. Payment-in-kind (PIKs).

B. Multi-term notes.

C. Bridge financing.

D. Rolling stock certificates.

Q.917 McMillan Electronics Company issued four types of debt to raise the capital of $730 million. The debt includes $400 million raised through secured bonds, $110 million through subordinate bonds, $40 million through unsecured loans, and $180 million through debenture bonds. If the company defaults, the total value of the assets to be distributed is $670 million. Determine the total claim that the debenture bondholders will receive.

A. $180 million

B. $160 million

C. $120 million

D. $0

Q.3582 The coupon reinvestment risk is directly correlated with which of the following?

A. Coupon rate

B. Reinvestment horizon

C. Both A and B

D. None of the above

Q.3583 Which of the following statements about reinvestment risk is INCORRECT?

A. A fixed coupon bond investor can eliminate reinvestment risk by holding a coupon bond until maturity

B. A bond's yield calculation assumes that the coupons and the principal can be reinvested at the yield to maturity

C. An investor concerned about reinvestment risk is most concerned about a decrease in interest rates

D. Zero-coupon bonds have zero reinvestment risk

Q.3584 A callable bond is a bond that:

A. Gives the issuer the right to redeem all or part of the bond before the maturity date

B. Gives the bondholder the right to sell the bond back to the issuer at a predetermined price before maturity

C. Gives the bondholder the right to exchange the bond for a specific number of common shares

D. None of the above

Reading 42: Mortgages and Mortgage-Backed Securities

Q.918 Mortgage-backed loans played a significant role in the 2007-2009 financial crisis. After the crisis, the importance of securitization of these loans increased furthermore. In the United States, there are multiple entities that securitize mortgage loans. Which of the following types of loans is securitized through the Federal National Mortgage Association?

A. Adjustable-rate mortgage loans.

B. Non-agency loans.

C. Jumbos.

D. Agency loans.

Q.919 Mohan Singh, a sales manager at a retail chain, has recently moved to Minnesota with his wife. He purchased a studio apartment with a mortgage loan of $140,000 at 5% for 20 years. Which of the following is the most appropriate estimation of the monthly installments on this loan?

A. $1,004.61

B. $923.94

C. $763.84

D. $340.60

Q.920 Which of the following is the accurate explanation of a mortgage loan with a prepayment option?

A. It allows the lender to demand the repayment before the maturity of the loan.

B. It restricts the borrower from repaying the mortgage before the maturity date.

C. It allows the borrower to demand the disbursement of the mortgage loan before the agreed disbursement date.

D. It allows the borrower to repay the mortgage loan before the maturity date of the loan.

Q.921 Alison Garry works in a small audit firm in Costa Rica. She and her boyfriend, Peter, recently obtained a mortgage to purchase a condo in a small beach town. The condo was purchased for $40,000 with the mortgage at 3.25% for 10 years. The mortgage also has a prepayment option. Which of the following statements is the most accurate?

A. The use of the prepayment option is appropriate if the mortgage rate increases to 3.75%.

B. The use of the prepayment option is appropriate if the mortgage rate remains at 3.25%.

C. The use of the prepayment option is appropriate if the mortgage decreases to 3.0%.

D. None of the above; prepayment is not a function of interest rates.

Q.922 Ahmed Saeed has recently graduated from the Frankfurt Finance School with a Bachelor's degree. He was invited by a small-size audit firm that provides audit services to small-medium companies and startups to take a test in order to join the firm as a junior risk analyst. In the test, he was asked to identify the definition of securitization. Which of the following is the appropriate definition of securitization?

A. Securitization is the process of securing the mortgage with a security or collateral, which the lender can use in case of default.

B. Securitization is the process of setting a bankruptcy-remote entity with the sole purpose issuing bank loans to individual borrowers.

C. Securitization is the process of setting a bankruptcy-remote entity with the sole purpose of acquiring asset-backed securities (ABSs).

D. Securitization is the process of converting a group of nonmarketable assets, or expected future cash flows on the assets, into units of marketable securities.

Q.924 Billy Clark is an investment manager at the Sachsenhausen Investment Bank based in Dusseldorf. Clark manages a pool of mortgages and the assets constructed with the pool. If the pool prepaid 1.1% of its principal above its amortizing principal as the percentage of total outstanding principal in the month of February, then which of the following is the appropriate annualized constant prepayment rate he can come up with?

A. 0.0302

B. 0.1243

C. 0.132

D. 0.1402

Q.925 The superior of an investment analyst made the following statements to differentiate between prime and sub-prime mortgages. In prime mortgages:
I. The mortgage borrower has a lower front income ratio
II. The mortgage borrower has a higher back-end income ratio
III. Loan-to-value ratios are lower

Which of these statements is/are incorrect?

A. Statement I only.

B. Statement II only.

C. Statement III only.

D. None of the statement is incorrect.

Q.926 Pooja Rao has recently joined Green Oceans Hedge Fund that invests in non-conventional investment assets and securities. Rao was instructed by the fund manager to evaluate four mortgage-backed securities of four different banks, and identify the riskiest MBS. Identify for Rao which of these MBSs has the highest risk.

A. Prime fixed-rate MBS.

B. Subprime fixed-rate MBS.

C. Prime adjustable-rate mortgage.

D. Subprime adjustable-rate mortgage.

Q.927 Adam Levy teaches the finance and investment courses at the Mumbai College of Economics. During one of his lectures on the subject of mortgages and mortgage-backed securities, he mentioned the following four features of a fixed rate level payment mortgage:
I. The amount of interest payment in a fixed-rate mortgage decreases as the maturity date of the mortgage approaches
II. The amount of principal payment on a fixed-rate mortgage decreases as time passes
III. Service fees in a fixed-rate mortgage decline as time passes
IV. The prepayment risk to the lender of the mortgage increases as the mortgage rates decrease

Which of the above-mentioned features is/are inconsistent with the features of fixed-rate level payment mortgages?

A. I only.

B. II only.

C. I and III.

D. All of the above features are consistent with fixed-rate mortgages.

Q.928 Boris Arkarov is a Russian real estate investor based in California. He has been investing in the real estate sector of California for the past 20 years and is famous for selling some luxurious villas to well-known Hollywood celebrities. In a magazine interview, Mr. Arkarov expressed that he wants to borrow to finance his personal residential estate in the suburbs of L.A that costs $10.5 million. If the loan-to-value ratio is 78%, calculate the amount of monthly payment that Mr. Arkarov has to pay on a 20-year mortgage at the rate of 9%.

A. $94,471.22

B. $73,687.55

C. $45,750

D. $34,890.74

Q.929 Karen Jacobs, a final year undergraduate student made the following points regarding mortgage pass-through securities. Which of Jacobs' statements is incorrect?

A. Mortgage pass-through securities represent investors' claim against a pool of mortgages.

B. All investors in one pool receive the same return.

C. The cash flows forwarded to those that have invested in a pass-through security exactly match the cash flows generated by the underlying mortgage pool.

D. Pass-through securities have prepayment risk.

Q.930 An analyst is analyzing the speed of the prepayments of mortgages in a specific city that are pooled into a mortgage-backed security. Suppose that the Public Securities Association (PSA) prepayment benchmark in the city is 100%, and the monthly conditional prepayment rate (CPR) of 20-year mortgages is expected to increase at the rate of 0.5% from the origination until the end of the 12th year. Then, the CPR is expected to increase at the rate of 0.7% until the maturity of the mortgage. Which of the following is the appropriate estimation of a single monthly mortality rate (SMM) for the 40th month?

A. 0.0004

B. 0.9313

C. 1.248

D. 0.01842

Q.931 Fixed-rate mortgage pass-through securities or the fixed-rate mortgage pool can trade in both specified pool markets and to-be-announced (TBA) markets. Which of the following differences between specified pool markets and to-be-announced markets of pass-through securities is/are incorrect?

I. Specified pool markets identify the number and the balance of the pool prior to the trade, whereas, in TBA markets, the number and the balance are not revealed until the settlement

II. TBA markets of pass-through securities are more liquid than specified pool markets

III. Specified pools with high loan balances trade for lower prices

A. Statement I is incorrect.

B. Statement II is incorrect.

C. Statement III is incorrect.

D. None of the statements are incorrect.

Q.932 A dollar roll transaction takes place when an investor purchases an MBS for a specific settlement month and simultaneously sells the MBS for a different settlement month. Dollar rolls are trading "special" when the implied financing rate is below current market rates, which means the implied repo rate is lower than the rate of the repurchase market. Which of the following is NOT a factor that causes dollar rolls to trade "special"?

A. An increase in the number of settlement transactions for the back-month date by the originators of the MBS.

B. An increase in the price of the MBS for the front-month settlement.

C. An increase in the supply of the front-month settlement MBS.

D. A shortage of MBSs in the market for delivery in the front-month.

Q.933 Anna Henderson is a high net-worth individual investor with Galaxy Investments Inc. Anna has recently learned about the investments and returns of mortgage-backed securities. Jacob Glen, a dedicated investment manager, briefed Henderson that she does not need to concern about the contraction risk of mortgage pool as their investment products are designed to mitigate risk. Which of the following is the most appropriate explanation for the contraction risk?

A. Contraction risk is the risk related to the increase in the expected life of a mortgage pool due to falling interest rates and higher prepayment rates.

B. Contraction risk is the risk related to the increase in the expected life of a mortgage pool due to increasing interest rates and lower prepayment rates.

C. Contraction risk is the risk related to the decrease in the expected life of a mortgage pool due to falling interest rates and higher prepayment rates.

D. Contraction risk is the risk related to the decrease in the expected life of a mortgage pool due to increasing interest rates and lower prepayment rates.

Q.934 Adam and Jack are participants in the Green Investment Bank university challenge. The program consists of presentations and strategies related to the complex investment instruments of the bank. The winning team is offered a 6-month internship at the bank. Adam and Jack presented an explanatory presentation on the features of collateralized mortgage obligations (CMOs). Which of the following features from the presentation are incorrect?

A. Collateralized mortgage obligations (CMOs) are securities issued against mortgage pools.

B. The cash flows of the CMOs are allocated to a number of different tranches.

C. Each tranche has an equal claim against the cash flows of the mortgage pools.

D. Each tranche of CMO has different extension risks and contraction risks.

Q.935 The Planned Amortization Class (PAC) is the most common and most widely traded tranche of collateralized mortgage obligations (CMOs). Which of the following features is the most inconsistent feature of a PAC tranche?
I. The amortization of a PAC tranche is based on the sinking fund schedule that must prepay the tranche within initial PAC collars
II. A PAC tranche is available with a support tranche, which is created from the original mortgage pool
III. If prepayment rates are higher than the upper repayment rate of PAC collars, then the support tranche absorbs the excess principal, and the PAC tranche receives the scheduled principal

A. Feature I is inconsistent.

B. Feature II is inconsistent.

C. Feature III is inconsistent.

D. None of the features are inconsistent.

Q.936 GrossHaus Investment Bank is one of the largest German investment banks that has more than 38% market share in financing residential and commercial properties. GrossHaus is not only involved in the mortgage business, but it also issues securities to its investors against mortgage pools. Robin Frazer has recently purchased a security from a bank that gives him a claim to the principal portion of a mortgage payment on a mortgage pool. Which of the following securities has Frazer has purchased from the bank?

A. A planned amortization class tranche (PAC).

B. A collateralized mortgage obligation (CMO).

C. A strip.

D. A mortgage back security (MBS).

Q.937 Since the mortgage borrowers have the option to prepay the underlying securities at any time, the valuation of the mortgage securities with this embedded options is not possible with the traditional valuation model. One of the mortgage securities valuation model uses probability distributions to value securities. In other words, it values the securities by allocating different probabilities to the multiple variables like future interest rate, shape of the yield curve, default rate, prepayment rate, etc. Which of the following models uses this approach?

A. Binomial model approach.

B. Best guess approach.

C. Monte Carlo simulation.

D. Black-Scholes Model.

Q.1144 Consider the following risks:
I. Interest rate risk
II. Pre-payment risk
III. Default risk
IV. Credit risk

Mortgage-Backed Securities (MBS) are exposed to which of these risks?

A. I

B. I, II & III

C. I, II, III & IV

D. II, III & IV

Q.3456 Suppose that an investor owns a pass-through security with an initial principal of $500 million. The remaining mortgage balance at the beginning of a certain month is $400 million. Assuming that the SMM is 0.4125% and the scheduled principal payment is $5 million, the estimated *prepayment for the month* is:

A. $1.65 million

B. $1.25 million

C. $2.04 million

D. $1.63 million

Q.3457 A fund holds $10 million nominal of the GNMA 5.5% 30-year bond. It enters into a one-month dollar roll with a repo dealer bank in which it sells the security at a price of 100-08 and buys it back at a forward price of par. Assuming that the security experiences a 2% paydown (scheduled principal plus prepayments) during the term of the trade, estimate the value of the drop.

A. $225,000

B. $22,500,000

C. $800,000

D. $250,000

Q.3458 Consider a pool of mortgages that were issued exactly 16 months ago at an effective interest rate of 6% p.a(they are beginning the 17^{th} month). What is the CPR and what is the SMM assuming 150 PSA?

A. CPR = 0.2141%; SMM = 0.01786%

B. CPR = 4.8%; SMM = 0.409%

C. CPR = 5.1%; SMM = 0.4353%

D. CPR = 3.4%; SMM = 0.2878%

Q.3459 TBA prices of the Freddie Mac 5% for June 10 and July settlements are \$104.20 and \$103.00, respectively. The accrued interest to be added to each of these prices is \$0.160. The expected total principal paydown (scheduled principal plus prepayments) is 2% of the outstanding balance and the prevailing short-term rate is 1.5%. Also, assume that the actual/360-day convention is applied. An investor wishes to roll a balance of \$10 million. Determine the value of the role.

A. \$436,000

B. \$13,045

C. \$109,680

D. \$97,698

Q.3460 A mortgage-backed portfolio includes four mortgage investments as follows:

- Mortgage 1: \$140,000 in current value, 5% interest rate, 5 years remaining duration
- Mortgage 2: \$100,000 in current value, 4% interest rate, 6 years remaining duration
- Mortgage 3: \$50,000 in current value, 6% interest rate, 3 years remaining duration
- Mortgage 4: \$60,000 in current value, 3% interest rate, 2 years remaining duration

What is the weighted average coupon of the portfolio?

A. 4.5%

B. 5.1%

C. 4.9%

D. 4.0%

Q.3461 A mortgage-backed portfolio includes four mortgage investments as follows:

- Mortgage 1: $150,000 in current value, 5% interest rate, 5 years remaining duration
- Mortgage 2: $100,000 in current value, 6% interest rate, 6 years remaining duration
- Mortgage 3: $50,000 in current value, 4% interest rate, 3 years remaining duration
- Mortgage 4: $80,000 in current value, 7% interest rate, 2 years remaining duration

What is the weighted average maturity (n years) of the portfolio?

A. 4.4

B. 5.1

C. 4.9

D. 4.0

Q.3462 A mortgage-backed security has the amortization schedule:

Month	Month 1	Month 2	Month 3
Total payment	$2,590.96	$2,590.96	$2,590.96
Principal	$1,653.46	$1,663.18	$1,672.89
Interest	$937.50	$927.78	$918.07
Loan balance	$247,409.04	$244,818.08	$242,227.12

Given that the conditional prepayment rate (CPR) is 4%, determine the anticipated prepayment for month 2 in dollars.

A. $831.40

B. $825.75

C. $834.55

D. $840.20

Q.3463 Consider the following residential mortgage:

- Loan amount: $500,000
- Annual rate of interest: 5.5% (fixed)
- Term: 10 years
- Start date: 01/01/2019

If payments are made monthly, what is the amortized amount for the 10-year loan?

A. $5,520.00

B. $5,426.21

C. $5,225.50

D. 4,834.55

Q.3464 A 30-year $150,000 mortgage has a fixed mortgage rate of 6 percent compounded monthly. What portion of the first payment is the principal?

A. $150

B. $149.33

C. $500

D. $750

Q.3465 Consider a 15-year $500,000 mortgage with a 6 percent interest rate. After 10 years, the borrower (the mortgage issuer) pays it off. How much will the lender receive?

A. $180,000

B. $220,000

C. $6,313

D. $218,245

Q.3466 Which of the following statements about fixed-rate mortgages is false, from the investor's perspective?

A. 30-year mortgages have lower monthly payments than 15-year mortgages

B. Scheduled monthly payments are constant over the life of the mortgage

C. Actual monthly payments may vary over the life of the mortgage

D. Absent of defaults, the actual monthly payments are never higher than scheduled monthly payments

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Q.3467 Consider a 15-year $500,000 mortgage with a rate of 6 percent. Ten years into the mortgage, rates have fallen to 5 percent. What would be the monthly saving to a homeowner from refinancing the outstanding mortgage balance at the lower rate? (Round your answer to the nearest unit.)

A. $265

B. $101

C. $0

D. $111

Q.3585 The Public Securities Association (PSA) prepayment benchmark assumes that the monthly prepayment rate for a mortgage pool:

A. Remains constant for the first 30 months and then increases by 0.2% for months 30 to 360

B. Increases by 0.2% every month up to 30 months

C. Decreases by 0.2% every month up to 30 months

D. Remains constant for the first 30 months and then decreases by 0.2% for months 30 to 360

Q.3586 During periods of falling interest rates, the refinancing of mortgage loans will:

A. Accelerate prepayments and reduce the average life of the MBS

B. Decelerate prepayments and increase the average life of the MBS

C. Accelerate prepayments and increase the average life of the MBS

D. Decelerate prepayments, but and decreases the average life of the MBS

Q.3587 Which of the following are considered as weights while determining the weighted average maturity of a mortgage pass-through security?

A. Time to maturity as a percentage of the total life of the security

B. Remaining principal of the ith mortgage to the total principal

C. Absolute value of coupon payments due

D. Remaining number of months to maturity for each mortgage loan

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Reading 43: Interest Rate Futures

Q.685 Tony Ingram is a junior portfolio analyst at BBV Pension Fund Inc. The pension fund invests in assets such as Treasury bonds, municipal bonds, and other less risky assets. BBV's portfolio contains a Treasury bond of the U.S. government that pays semiannual interest of 7% on January 1st and July 1st. If Ingram wants to calculate the interest earned on the Treasury bond between July 1st and October 11th, then which of the following day count convention is most suitable?

A. 100 days / 184 days

B. 100 days / 180 days

C. 102 days / 180 days

D. 102 days / 184 days

Q.686 An investment manager at Galaxy Investments Co. is analyzing the interest earned on the corporate bond of Aero Supermarts, a chain of grocery stores. The bond pays semiannual interest of 13% on March 1st and September 1st. Using the appropriate day count convention, determine the interest earned on the bond between September 1st and February 12th.

A. 6.5%

B. 5.92%

C. 5.81%

D. 5.87%

Q.687 Fahim Zakaria, a fund manager based in Qatar, manages a sovereign fund for the Qatari government. The fund has more than $12.6 billion in assets under management. The fund invests only in the shares of blue-chip firms and the sovereign bonds/bills of different countries. If the manager wants to include a 164-days U.S. Treasury bill which is quoted as 9, then what is the cash price of the bill?

A. $96

B. $95.9

C. $93.7

D. $91

Q.688 Silvia Hank is the head of the fixed-income investment unit of a large investment bank in Malaysia. The human resources department has recently hired a junior analyst under supervision. The junior analyst has no experience in the investment industry, but he is a skilled statistician, which can be useful for conducting quantitative research. Hank instructed the analyst to calculate the cash prices of Treasury bills based on their quoted prices. However, she believes that the cash price and the quoted price that the junior analyst provided may be incorrect. Which of the following prices and quotes is/are incorrect?
I. The price of the 136-day Treasury bill which is quoted as 8 is $98
II. The price of a 90-day Treasury bill which is quoted as 13 is $96.75

A. The price of the 136-day Treasury bill is incorrectly calculated

B. The price of the 90-day Treasury bill is incorrectly calculated

C. The price of both the 136-day and the 90-day Treasury bills are incorrectly calculated

D. The price of both the 136-day and the 90-day Treasury bills are correctly calculated

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Q.689 Lucy Anderson is working for one of Canada's largest investment banks, where she is responsible for the training of a new batch of fixed-income investment analysts. During the training session on the subject of Treasury bills and Treasury bonds, she made the following two statements regarding the price of Treasury bonds:
I. The clean price of the bond includes the quoted price plus the accrued interest on that bond, which is why sellers of the bond prefer clean price quotes.
II. The dirty price of the bond is equal to the clean price minus accrued interests. The dirty price is also considered as equal to the quoted price. Since it doesn't pay accrued interest to the seller of the bond, it is regarded as a dirty price.

Which of Anderson's statements is/are inconsistent with the definition of clean price and dirty price?

A. The definition of the clean price is incorrect.

B. The definition of the dirty price is incorrect.

C. Both clean and dirty price definitions are incorrect.

D. None of the definitions are incorrect.

Q.690 An analyst wishes to estimate the dirty price of a $100,000 face value Treasury bond with an annual coupon of 8% paid semiannually on December 10th and on June 10th. The bond was purchased on April 8, 2017, when the quoted price was 93-8. If the Treasury bond's maturity date is December 10th, 2020, what is the bond's dirty price?

A. $93,250

B. $94,865

C. $95,125

D. $95,865

Q.691 Futures contracts on Treasury bonds are well-known investment instruments for large investment banks and sovereign funds. Such futures include a large variety of Treasury bonds with maturities ranging from 15 to 25 years. Since the deliverable bonds under the futures contracts have different market values, the exchanges have taken a measure for adjusting the price received by the short position holder in the futures contracts according to the specific Treasury bond or note delivered.
Which of the following is that measure?

A. Dirty price

B. Convexity adjustment

C. Conversion factor

D. Clean price

Q.692 Amy Jackson, a fixed investment manager at Flaxes Investment Company headquartered in Toronto, has a short position in 15-year Treasury bond contracts with a $100,000 face value for each contract. The last quoted price of the contract is 91-28, while the accrued interest on the bond is $3.29 (for $100 face value). If the conversion factor for the deliverable bond under the contract is 1.471, then which of the following is true?

A. The cash received by the short-position party is $138,438.

B. The cash paid by the short-position party is $138,438.

C. The cash paid by the short-position party is $139,987.

D. The cash received by the short-position party is $139,987.

Q.693 An investor with a short position is about to deliver a bond and has four bonds to choose from which as listed in the following table. The last settlement price (quoted futures price) is $96.25. Determine which bond is the cheapest-to-deliver.

Bond	Quoted bond price	Conversion factor
1	99	1.02
2	122	1.22
3	107	1.1
4	112	1.15

A. Bond 1

B. Bond 2

C. Bond 3

D. Bond 4

Q.694 Matias Agrov runs an independent investment advisory and investment education services business in Moscow. His investment advisory services are focused on fixed-income investments and interest rate futures, which he renders to high net worth individuals and small corporations. He also conducts weekly free webinars to educate beginner investors on interest rates futures and derivatives. In one of his weekly webinars, he made the following statements in order to get rid of any confusion about prices of Treasury bond derivatives:
I. The cash price of a Treasury bond is also the dirty price of the same bond
II. The quoted price of a Treasury bond is also the clean price of the same bond

Which of his statements is/are correct?

A. Only statement I is correct.

B. Only statement II is correct.

C. Both statements are correct.

D. None of the statements is correct.

Q.695 Since there is a large universe of Treasury bonds and futures contracts on those bonds, there is a large number of Treasury bonds available to be delivered at any point in a month. However, due to the imperfection of conversion factors used by exchanges, at times it is cheaper to deliver one bond as compared to another bond. Which of the following options truly defines the cheapest-to-deliver option?

A. The cheapest-to-deliver option allows the long position holder of the futures contract on a Treasury bond to choose which is the cheapest bond to receive.

B. The cheapest-to-deliver option allows the long position holder of the futures contract on a Treasury bond to choose which is the cheapest bond to deliver.

C. The cheapest-to-deliver option allows the short position holder of the futures contract on a Treasury bond to choose which is the cheapest bond to receive.

D. The cheapest-to-deliver option allows the short position holder of the futures contract on a Treasury bond to choose which is the cheapest bond to deliver.

Q.696 Henry Louis is a derivative investment manager at the Global First Investment Bank in Singapore. He manages a portfolio of fixed income assets and interest rate futures. He currently has a short position in a futures contract on GILTS (U.K. equivalent to U.S. Treasury securities). As the delivery month is approaching, the manager has to choose the cheapest-to-deliver bond from the four available bonds. If the last settlement price is 95-16, which of the following bond is the cheapest to deliver?

Bond	Quoted bond price	Conversion factor
A	$99	1.011
B	$97	1.001
C	$103	1.069
D	$107	1.072

A. Bond A

B. Bond B

C. Bond C

D. Bond D

Q.697 Paula Sigel is the head of the interest rate futures unit of Thomson Investment Company. Thomson has traditionally only invested in equities and currencies, but it has recently set up a new division that only focuses on the investments in futures contracts on Treasury bonds. It has come to Paulina's attention that due to a lack of familiarity with derivatives trading, her team is having difficulty determining the cheapest to deliver bonds. To overcome this difficulty, Sigel came up with the following guidelines to better identify the cheapest-to-deliver bonds:
I. When the yield is greater than 6%, the cheapest-to-deliver bonds tend to be low-coupon with shorter maturities
II. When the yield is less than 6%, the cheapest-to-deliver bonds tend to be high-coupon with longer maturities
III. When the yield curve is upward sloping, the cheapest-to-deliver bonds tend to have shorter maturities

Determine which of Paulina's statements is/are incorrect.

A. Only statement III is incorrect.

B. Only statements I and II are incorrect.

C. Only statements II and III are incorrect.

D. Statements I, II, and III are all incorrect.

Q.698 According to recent data, the most frequently traded futures contract in the United States is the 3-month Eurodollar futures contract that is traded on the Chicago Mercantile Exchange (CME). Which of the following is the appropriate and complete definition of a Eurodollar futures contract?

A. It is the foreign currencies futures contract on euros/dollars. The underlying interest rate of the contract is the 3-month forward LIBOR.

B. It is the foreign currencies futures contract on euros/dollars. The underlying interest rate of the contract is the 3-month forward LIBOR and the 3-month U.S. risk-free rate.

C. It is the interest rate futures contract on Eurodollars or on the U.S. dollars deposited outside of the U.S. The underlying interest rate of the contract is the 3-month U.S. risk-free rate.

D. It is the interest rate futures contract on Eurodollars or on the U.S. dollars deposited outside of U.S. The underlying interest rate of the contract is the 3-month forward LIBOR.

Q.699 Alina Escobar is a junior derivatives analyst at the derivatives investment unit of a financial institution. The company holds a mid-day meeting where managers discuss investment strategies according to recent trends in the market. Escobar's manager asked her to estimate the price of a March Eurodollar futures contract that is quoted as 94.25. Estimate the effective dollar price that the firm will have to pay if the firm ultimately decides to invest in the March Eurodollar futures contract.

A. $942,500

B. $985,625

C. $991,750

D. $1,050,870

Q.700 Cristiano Christopher is a portfolio manager at Blue Waters Hedge Fund. During a networking event held for all the junior and senior hedge fund and mutual funds manager, Christopher argued with one of his colleagues that there are significant differences between Eurodollar futures contracts and forward rate agreements (FRAs). Here are the two differences that Christopher mentioned:
I. The Eurodollar futures contract is similar to a forward rate agreement (FRA). However, Eurodollar futures contracts are settled daily whereas FRAs are not settled daily.
II. Eurodollar futures contracts are traded on major exchanges, while FRAs are OTC derivatives.

Nevertheless, his colleagues refuse to agree with him as they believed these differences are incorrect. Determine which of his statement(s) is/are correct?

A. Statement I is correct.

B. Statement II is correct.

C. Both statements are correct.

D. None of the statements is correct.

Q.701 As the Eurodollar futures contracts are marked to market on a daily basis, the Eurodollar futures contract can result in differences between actual forward rates and those implied by futures contracts. Generally, in the longer maturities Eurodollar futures contracts, the implied forward rates (futures interest rates) are greater than the actual forward rates. Which of the following is useful in reducing the mentioned above difference between the implied forward rates and the actual forward rates?

A. Convexity adjustment.

B. Conversion factor.

C. Duration adjustment.

D. Dirty price.

Q.702 Xiaoping Yu is an investment manager at Shanghai Derivatives Investors Lounge, an investment company that solely invests in derivatives. At the beginning of the current fiscal year, Yu and her team constructed a hedge with interest rates futures contracts by taking long positions in futures contracts. Yu believes that the interest rates will start to increase in the foreseeable future. Which of the following actions should Yu take in order to protect her position?

A. As the prices of interest rate futures contract will increase, Yu should take a long position in interest futures contracts.

B. As the prices of interest rate futures contract will decrease, Yu should take a long position in interest futures contracts.

C. As the prices of interest rate futures contract will increase, Yu should take a short position in interest futures contracts.

D. As the prices of interest rate futures contract will decrease, Yu should take a short position in interest futures contracts.

Q.703 Anil Kumar has recently joined Axe Investment Bank as a junior analyst through a global analyst recruitment program. In order to impress the management of the asset management unit of the bank, Kumar decides to create a combined position in interest rate futures contracts that does not change in value with small changes in yield. Which of the following can help him create such a position?

A. Convexity-hedging.

B. Duration-based hedging.

C. Hedging with FRAs.

D. DV01 hedging.

Q.704 Anil Kumar has recently joined Axe Investment Bank as a junior analyst through a global analyst recruitment program. In order to impress the management of the asset management unit of the bank, he decided to create a combined position in interest rate futures contracts that does not change in value with small changes in yield. With the help of a duration-based hedging strategy, he created a combined position of a portfolio and interest rate futures contracts that has zero duration, which means the value of the position will not change with the small changes in yield. However, his manager did not like the idea of using duration-based hedging or duration as a single risk measurement tool because of its limitation. His manager mentioned the following limitations of duration:
I. Since duration only measures the linear approximation of the relationship between two variables, it is inappropriate to use duration since the price/yield relationship of a bond is convex.
II. Duration implies that the yields are non-correlated. However, in the long run, when the changes in interest rates are non-parallel or non-correlated, the use of duration is limited.

Which of these limitations is/are accurate?

A. Only limitation I is accurate.

B. Only limitation II is accurate.

C. Both the limitations are accurate.

D. None of the limitations are accurate.

Q.3555 A 3.125% government bond is priced for settlement on April 12, 2016. The bond makes quarterly coupon payments on June 30th, September 30th, December 31st, and March 31st. What is the bond's accrued interest per 100 of par value?

A. 0.672

B. 0.1030

C. 0.4121

D. 0.1713

Q.4916 Suppose that the forward rate for the period between year 2 and year 4 is 2.5%. Suppose further that the interest rate of the two-year zero-coupon is 5.5%. What is the 4-year zero-coupon interest rate?

A. 8%

B. 4%

C. 2.625%

D. 3.375%

Q.4918 Suppose a firm has a $20,000,000 portfolio of Treasury bonds with a portfolio duration of 5. Suppose further that the cheapest to deliver bond has a duration of 3 and that the six-month treasury bond futures price is $200,000. What is the number of futures contracts to fully hedge the portfolio?

A. 60 contracts should be shorted.

B. 166 contracts should be shorted.

C. 166 contracts should be bought.

D. 500 contracts should be shorted.

Q.4919 A Treasury bond pays coupons at the rate of 12% per year on March 1 and September 1. What is the accrued interest between March 1 and April 30 per USD 100 of face value?

A. 1.9891

B. 0.9783

C. 1.9565

D. 0.9946

Q.4920 A corporate bond pays coupons at the rate of 12% per year on March 1 and September 1. What is the accrued interest between March 1 and April 30 per USD 100 of face value?

A. 0.9833

B. 0.9779

C. 1.0000

D. 1.9667

Q.4921 Suppose a Treasury bill lasts for 230 days and has a quoted price of 5.5 What is the cash price of the Treasury bill?

A. 91.2717

B. 96.4861

C. 96.5342

D. 91.3913

Q.4922 A Treasury bond pays coupons at the rate of 10% per year on June 1 and December 1. What is the accrued interest between June 1 and July 31 per USD 100 of face value (rounded to two decimal places)?

A. $1.64

B. $1.5

C. $1.62

D. $1.66

Q.4923 Suppose that the bond that will be cheapest to deliver in a Treasury bond futures contract pays annual coupons of 6% per annum on March 1 and September 1 and will be delivered on July 1. Suppose further that the bond's quoted price on June 1 is 120.00, and its conversion factor is 1.2424. If all interest rates are 5 % continuously compounded, what is the clean futures price on July 1?

A. 121.50

B. 121.48

C. 120.01

D. 123.51

Q.4924 Suppose that the bond that will be cheapest to deliver in a Treasury bond futures contract pays annual coupons of 6% per annum on March 1 and September 1 and will be delivered on July 1. Suppose further that the bond's quoted price on June 1 is 120.00, and its conversion factor is 1.2424. If all interest rates are 5 % continuously compounded, what is the estimated futures price on July 1?

A. 98.78

B. 120.00

C. 96.60

D. 122.00

Q.4925 Suppose the price of a four-year Eurodollar futures contract 95. Suppose further that the standard deviation of the change in the short rate in one year is 0.25%. What is the continuously compounded forward rate between 4.0 and 4.25 years?

A. 5.032

B. 5.069

C. 5.000

D. 5.038

Q.4926 Suppose that a nine-month interest is expected to be paid on a USD 30,000,000 bond. Suppose further that three-month Eurodollar futures contracts are used to hedge the nine-month interest and that the nine-month period starts at the maturity of the futures contract that will be used. How many three-month Eurodollar futures contracts are necessary to hedge the nine-month interest? (Ignore the differences between Eurodollar futures and FRAs)

A. 30

B. 45

C. 90

D. 60

Q.4927 Suppose that a bond portfolio of USD 100,000,000 has a duration of 5. Suppose further that the current Treasury bond futures price is USD 104 and that the cheapest to deliver bond has a duration of 5 at maturity. What is the number of contracts that should be traded to fully hedge the portfolio?

A. 52

B. 96

C. 10

D. 100

Q.4928 Paul Shawn, an FRM candidate, made the following comments regarding SOFR.

I. SOFR is the overnight repo rate.
II. An investment is rolled forward day-by-day at the SOFR rate to calculate the rate that would have been earned over the past three months.

Which of the above statement(s) is/are true?

A. I only

B. I and II

C. II only

D. None of the above

Q.4929 Suppose that the bond that will be cheapest to deliver in a Treasury bond futures contract pays annual coupons of 6% per annum on March 1 and September 1 and will be delivered on July 1. Suppose further that the bond's clean futures price is 121.4848 on June 1 and its conversion factor is 1.2424. If all interest rates are 5% continuously compounded, what is the dirty price on June 1?

A. 121.99

B. 119.46

C. 123.00

D. 123.51

Q.4930 Three bonds, A , B, and C, all eligible for delivery, have quoted prices of 90-115, 105-120, and 110-230, respectively. The conversion factors of the bonds are 0.7174, 0.7381, and 0.9576, respectively. Assume that the last settlement price for each of these bonds is $96.50. Which is the cheapest to deliver?

A. Bond A

B. Bond B

C. Bond C

D. None of the above

Q.4931 Suppose that under the terms of a futures contract, a treasury bond will be delivered in 210 days. Suppose further that the last coupon of the bond was paid 35 days ago, and the next coupon will be paid in 130 days. If the risk-free rate is 4% with continuous compounding and the bond pays a coupon of 10% compounded semi-annually, what is the futures price of the bond if the clean price is USD 102.00?

A. 103.06

B. 105.46

C. 101.50

D. 100.42

Q.4934 What undesirable trading behavior involves using market developments after 4 pm to cancel or carry out a trade?

A. Late Trading.

B. Market Timing.

C. Directed Brokerage.

D. Front Running.

Reading 44: Swaps

Q.705 Which of the following options is a correct differentiating feature between swaps and forward contracts?

A. Forward contracts trade on over-the-counter markets, while swaps trade on exchanges.

B. Forward contract holders have an obligation, while swap holders have the right to buy or sell the underlying security in the future.

C. Forward contracts can be customized, but swaps are standardized.

D. There is only one exchange of cash flow at a future date in a forward contract, whereas there are many exchanges of cash flows on multiple future dates in a swap.

Q.706 Susanne Milson is a chief investment manager at Dornbusch Electric Co. A year ago, her company entered into a 5-year derivative contract with the Allied French Bank to pay quarterly cash flows equal to the fixed interest rate of 2.7% on a notional principal of €250 million. In return, Allied French Bank agreed to pay the quarterly cash flow equal to the 3-months LIBOR on the same notional principal. Accurately identify the derivative instrument that is being used by Milson's company.

A. Futures contract

B. Forward contract

C. Call option

D. Swaps

Q.707 Leipzig Auto Company is one of the largest auto interior maker firms in Germany. On April 1st, 2017, the company entered into a 3-year swaps contract with the Allied-Swiss Bank to pay quarterly cash flows equal to the fixed interest rate of 5.7% on a notional principal of €30 million. In return, Allied-Swiss Bank agreed to pay the quarterly cash flow equal to the 3-months LIBOR on the same notional principal. After reviewing the terms of the contract, determine Allied-Swiss Bank's position in the swap contract.

A. Fixed-rate-payer

B. Libor-receiver

C. Floating-rate-payer

D. Floating-rate-receiver

Q.708 Swaps are customizable derivative contracts between two parties that trade in the over-the-counter (OTC) markets around the world. Financial intermediaries and companies have used swaps for multiple purposes. The most popular and basic swap agreement, which is used worldwide, is called the plain vanilla swap. Which of the following is the underlying variable of plain vanilla swaps?

A. Currency exchange rates

B. Interest rates

C. Volatility

D. Equities

Q.709 Kevin Bernard, the head of the derivatives trading department at Savers Bank, entered into a 3-year swap agreement on September 30, 2015, with Moon Traders. In the agreement, Savers Bank agreed to pay Moon Traders an interest rate of 5% compounded semiannually on the principal of $100 million. In return, Moon Traders agreed to pay Savers the LIBOR rate on the same principal. If the LIBOR prevailing on March 30, 2016, is 4.95% compounded semiannually, which of the following statements is true?

A. Savers Bank will pay $25,000 to Moon Traders on March 30, 2016.

B. Savers Bank will receive $25,000 from Moon Traders on March 30, 2016.

C. Savers Bank will pay $25,000 to Moon Traders on September 30, 2016.

D. Savers Bank will receive $25,000 from Moon Traders on September 30, 2016.

Q.710 Muhammad Ali is a credit risk manager at Green Flag Investment Company. Recently, Green Flag Investment Company borrowed $50 million from another investment bank at the rate of the 6-month LIBOR plus 50 basis points. Ali worries that the LIBOR can significantly increase due to the current economic situation of the country, which can increase the investment company's liability. If Ali intends to change the floating rate liability into a fixed rate liability, which of the following positions can transform the floating rate liability into a fixed rate liability?

A. A fixed-rate payer position in a swap.

B. A short position in interest futures.

C. A long position in a forward rate agreement.

D. A short position in call options.

Q.711 Assume that you are a swap dealer and have just acted as a counterparty in an interest rate swap. The notional principal for the swap was $7.5 million and you are now obligated to make five annual payments of 8 percent interest. The floating rate that you will receive is 8.2 percent, and the floating payments to you are annual as well.
If the floating rate remains unchanged for the first two years and then falls by 1.5 percent for the remainder of the contract, what will be your net payments for the five years?

A. $62,000

B. $30,500

C. $203,500

D. $262,500

Q.712 Hygiene Foods Inc. is one of the largest fast-moving consumer goods (FMCG) company in Malaysia. Last year, it entered into a 3-years swap agreement to pay semiannual cash flows equal to the 6-months LIBOR plus 20 basis point on the notional principal of $400 million. Which of the following parties is most likely the counterparty of the given swap agreement?

A. The exchange

B. A clearinghouse

C. Financial intermediaries

D. The central bank

Q.713 Sunil Kumar is a professor on the subject of financial derivatives and hedging mechanics at the Delhi School of Finance (DSF). During one of his lectures that emphasized the roles and responsibilities of financial intermediaries in swaps, he mentioned the following:
I. Financial intermediaries ensure that the obligation of swap agreements is honored even when the opposite party of the swaps defaults
II. Financial intermediaries can enter into two offsetting transactions in a swap agreement without letting know the two parties of the swap
III. Financial intermediaries can also act as market makers

Which of the following mentioned roles of financial intermediaries are appropriately described?

A. Roles I and II are appropriate.

B. Roles II and III are appropriate.

C. Roles I and III are appropriate.

D. Roles I, II, and III are appropriate.

Q.714 Faheem Salami has recently joined a large investment bank that acts as a financial intermediary in a number of swaps agreements. The bank also acts as the market maker when the counterparties to swaps are unavailable. Salami's boss asked him to calculate the swap rate of the 6-month interest rate swap when the 6-month LIBOR is 4.3%.
Salami also knows that the 6-month risk-free rate is 3.9%, and the bid and offer rates for the swap are 4.02 and 4.08, respectively.

Which of the following rates is the accurate swap rate for the specific swap agreement?

A. 3.90%

B. 4.05%

C. 4.10%

D. 4.30%

Q.715 Otto Cornell is the head of the finance department of Easy Home Appliances Inc. The firm intends to enter into a swap agreement to convert its outstanding floating-rate liability into a fixed rate liability. Therefore, the firms decided to enter into a fixed-rate payer position in a 2-year swap rate agreement to pay the quarterly cash flow equal to a 6% fixed rate to the Great Spanish Bank (GSB). In return, GSB agreed to pay quarterly cash flow equal to 3-month LIBOR to the firm. Since, it is the first transaction of this nature, the head of the financial department does not know that who has to facilitate the preparation of the confirmation of swap or the master agreement. Which of the following is most likely to facilitate the confirmation?

A. Great Spanish Bank.

B. Financial intermediaries.

C. The International Swaps and Derivatives Association.

D. The Securities and Exchange Commission (SEC).

Q.717 Fabian Fabio is a former currency trader at Global FX Corp. He recently joined Baltic Investments Company as the head of currency derivatives. After joining Baltic, he circulated an informative email regarding terms and terminologies of currency swaps to his team. His email contained the following details regarding currency swaps:
I. Unlike other derivatives, the value of currency swaps is non-zero at the initiation of currency swaps
II. Each periodic exchange of interest rate in a currency swap is equal to a forward foreign exchange contract
III. Currency swaps are used to transform debt denominated in one currency into debt denominated in another currency

Which of the mentioned attributes of currency swaps are correctly defined in the email?

A. Attributes I & II

B. Attributes II & III

C. Attributes I & III

D. Attributes I, II & II

Q.718 Cherry Inc. and Sang Wang are the two market leaders in the tablet PC market. Cherry Inc. is an American company while Sang Wang is headquartered in Japan. Both companies are considering taking on debt in either USD or Yen. The following table shows the borrowing rates for both companies.

	USD	Yen
Cherry Inc.	3.5%	9%
Sang Wang	5.5%	10.4%

Considering the comparative advantage argument, estimate the total gain both companies can have if they enter into a currency swaps contract.

A. 4.7%

B. 2.2%

C. 1.4%

D. 0.6%

Q.719 Black Corporation and UK Fabrics have entered into a 3-year currency swap agreement with periodic annual payments, where Black agreed to pay 5% in British pound (GBP) on the principal amount of GBP 100 million to UK Fabrics. In addition, UK Fabrics agreed to pay 7% to Black on the principal of $120 million. The currency exchange rate at the initiation of the swap was USD 1.26 per GBP. If the interest rate in the United States and Great Britain are flat at 5.5% and 6.8%, respectively, but the dollar has appreciated in value against the GBP, then determine which of the following is true.

A. The value of the swap to Black Corporation will increase.

B. The value of the swap to UK Fabrics will increase.

C. The value of the swap to both the companies will increase.

D. The value of the swap will be unaffected by subsequent changes in exchange rates.

Q.721 Green Grass Co. intends to enter into a 5-year fixed for floating interest rate swap with MNG Bank. Green agrees to pay annual cash flow equal to a fixed interest rate of 5% on the principal of €140 million to the bank in exchange for receiving the annual cash flow equal to 1-year LIBOR plus 50 basis points on the same notional principal from the bank. However, Green Grass does not want to exchange the notional principal at the inception of the swap. Instead, it wants to decrease the principal in a predetermined manner. Which of the following swaps is most suitable for this transaction?

A. Basis swap

B. Amortizing swap

C. Deferred swap

D. Step up swap

Q.722 Heidelberg Brewery wants to enter into a 3-year swap agreement with Everest Investment Co. Heidelberg intends to pay semiannual cash flows equal to the 10-year swap rate on the principal of €100 million to the Everest Investment in exchange for receiving semiannual cash flows from the investment company equal to the 6-month LIBOR on the same notional principal. Which of the following swaps is most suitable for this transaction?

A. LIBOR-to-floating swap

B. Step-up swap

C. Constant maturity swap

D. LIBOR in arrears swap

Q.723 Henry Coelho, the Chief Financial Officer of Imperial Hotels & Resorts, intends to enter into a 4-year interest rate swap with a financial institution. Imperial agrees to pay quarterly cash flow equal to the 3- month LIBOR rate on the notional principal of $200 million to the financial institution in exchange for receiving the annual cash flow equal to 550 basis points on the same notional principal from the financial institution. However, Coelho does not want to enter into a swap at the moment, but he wants to purchase an instrument that allows him to enter into the swap agreement on specified terms at a predetermined date. Which of the following instruments is most suitable for Coelho?

A. Extendable Swap

B. Callable Swap

C. Swaption

D. Constant Maturity Swap

Q.3556 What is the difference between a fixed-for-floating swap and a forward contract?

A. The payment date would be unlikely to match in a fixed-for-floating swap while the exact expiration date is known as a forward contract.

B. All the fixed-rate payments in a swap are equal, while in a forward contract, only one fixed payment is made on the settlement date.

C. The floating-rate payments in a swap are known at the start of the contract while future payments in a forward contract unknown at the contract initiation.

D. None of the above.

Q.3557 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, what is the amount that TIEN would receive on the current settlement date?

A. $250,000

B. $625,000

C. $465,000

D. $375,000

Q.3558 Company X seeks a 4-year fixed-rate US dollar funding while Company Y seeks a 4-year fixed-rate Japanese yen funding. Company X's direct borrowing all-in-cost is 10.50% in dollars and 8% in Japanese yen. Company Y's direct borrowing all-in-cost is 9.30% in dollars and 9% in Japanese yen. What is the maximum gain for all parties involved through this swap?

A. 2.2%

B. 1%

C. 1.2%

D. 0.2%

Q.3559 Consider the following statement: "A currency swap exposes parties to two sources of risk – interest rate and currency risk – while provides protection against default risk."
The statement is INCORRECT with respect to:

A. Default risk

B. Currency risk

C. Interest rate risk

D. None of the above

Q.3560 If Core Bank sells a swaption, it has:

A. The obligation to enter into a swap if the swaption is exercised

B. The right, but not the obligation to enter into a swap if the swaption is exercised

C. The obligation to make a payment to the counterparty if the swaption is exercised

D. The right, but not the obligation to make a payment to the counterparty if the swaption is exercised

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