2019 年 5 月 FRM 一级模拟考试（二）

1. A trader writes the following 1-year European-style barrier options as protection against large movements in a non-dividend paying stock that is currently trading at EUR 40.96.

Option	Price (EUR)
Up-and-in barrier call, with barrier at EUR 45	3.52
Up-and-out barrier call, with barrier at EUR 45	1.24
Down-and-in barrier put, with barrier at EUR 35	2.00
Down-and-out barrier put, with barrier at EUR 35	1.01

All of the options have the same strike price. Assuming the risk-free rate is 2% per annum, what is the common strike price of these options?

A. EUR 39.00

B. EUR 40.00

C. EUR 41.00

D. EUR 42.00

2. At the end of one day a clearinghouse member is long 100 contracts, and the settlement price is $50,000 per contract. The original margin is $2,000 per contract. On the following day the member becomes responsible for clearing an additional 20 contracts, entered into at a price of $51,000 per contract. The settlement price at the end of this day is $50,200. How much does the member have to add to its margin account with the exchange clearinghouse?

A. $40000

B. $20000

C. $16000

D. $36000

3. A company has a $20 million portfolio with a beta of 1.2. It would like to use futures contracts on the S&P 500 to hedge its risk. The index is currently standing at 1080, and each contract is for delivery of $250 times the index. What is the hedge that minimizes risk? What should the company do if it wants to reduce the beta of the portfolio to 0.6?

A. Sell 89 contracts; Sell 44 contracts

B. Buy 89 contracts; Sell 44 contracts

C. Sell 44 contracts; Sell 89 contracts

D. Sell 44 contracts; Buy 89 contracts

4. Suppose that the standard deviation of quarterly changes in the prices of a commodity is

$0.65, the standard deviation of quarterly changes in a futures price on the commodity is $0.81, and the coefficient of correlation between the two changes is 0.8. What is the optimal hedge ratio for a 3-month contract?

A. 0

B. 0.642

C. 0.321

D. 0.50

5. Which of the following assumptions are made when using DV01 as a measure of interest rate risk?

I. Changes in the interest rates are small.

II. The yield curve is flat.

III. Changes to the yield curves are parallel.

IV. The yield curve is downward sloping.

A. I and III

B. I and II

C. I and IV

D. II and III

6. The term structure of interest rates is upward-sloping. Put the following in order of magnitude:

(a) The 5-year zero rate

(b) The yield on a 5-year coupon-bearing bond

(c) The forward rate corresponding to the period between 5 and 5.25 years in the future

What is the answer to this question when the term structure of interest rates is upward-sloping?

A. c > a > b

B. a > c > b

C. c > b > a

D. b > a > c

7. A 10-year 8% coupon bond currently sells for $90. A 10-year 4% coupon bond currently sells for $80. What is the 10-year zero rate? (Considering continuously compounding)

A. 3.27%

B. 3.37%

C. 3.47%

D. 3.57%

8. The cash prices of 6-month and 1-year Treasury bills are 94.0 and 89.0. A 1.5-year bond that will pay coupons of $4 every 6 months currently sells for $94.84. A 2-year bond that will pay coupons of $5 every 6 months currently sells for $97.12. Calculate the 6-month, 1-year, 1.5-year, and 2-year zero rates. (continuously compounded)

A. 12.38%; 11.55%; 11.5%; 11.3%

B. 12.38%; 11.65%; 11.4%; 11.3%

C. 12.38%; 11.65%; 11.5%; 11.3%

D. 12.38%; 11.65%; 11.5%; 11.2%

9. A 5-year bond with a yield of 11% (continuously compounded) pays an 8% coupon at the end of each year.

(a) What is the bond's price?

(b) What is the bond's Macaulay duration?

(c) Use the duration to calculate the effect on the bond's price of a 0.2% decrease in its yield.

A. 86.80; 4.256; bond price increase to 87.47

B. 85.80; 4.156; bond price increase to 86.54

C. 85.80; 4.256; bond price increase to 87.47

D. 86.80; 4.156; bond price increase to 86.54

10. Bonds issued by the XYZ corp, are currently callable at par value and trade close to par. The bonds mature in 8 years and have a coupon of 8%.The yield on the XYZ bonds is 175 Basis points over 8-year US treasury securities, and the Treasury spot yield curve has a normal, rising shape. If the yield on bonds comparable to the XYZ bond decreases sharply, the XYZ bonds will most likely exhibit:

A. Negative convexity

B. Increasing modified duration

C. Increasing effective duration

D. Positive convexity

11. Assume that the risk-free interest rate is 9% per annum with continuous compounding and that the dividend yield on a stock index varies throughout the year. In February, May, August, and November, dividends are paid at a rate of 5% per annum. In other months,

dividends are paid at a rate of 2% per annum. Suppose that the value of the index on July 31, 2002, is 300. What is the futures price for a contract deliverable on December 31, 2002?

A. 305.34
B. 306.34
C. 307.34
D. 308.34

12. The 2-month interest rates in Switzerland and the United States are, respectively, 3% and 8% per annum with continuous compounding. The spot price of the Swiss franc is $0.6500. The futures price for a contract deliverable in 2 months is $0.6600. What arbitrage opportunities does this create?

A. Borrow US dollars to buy Swiss franc and sell Swiss franc futures
B. Borrow Swiss franc to buy US dollars and sell US dollars futures
C. Borrow US dollars to buy Swiss franc and buy Swiss franc futures
D. Borrow Swiss franc to buy US dollars and buy US dollars futures

13. A risk manager is deciding between buying a futures contract on an exchange and buying a forward contract directly from a counterparty on the same underlying asset. Both contracts would have the same maturity and delivery specifications. The manager finds that the futures price is less than the forward price. Assuming no arbitrage opportunity exists, what single factor acting alone would be a realistic explanation for this price difference?

A. The futures contract is more liquid and easier to trade.
B. The forward contract counterparty is more likely to default.
C. The asset is strongly negatively correlated with interest rates.
D. The transaction costs on the futures contract are less than on the forward contract.

14. The three-month Eurodollar futures price for a contract maturing in six years is quoted as 95.20. The standard deviation of the change in the short-term interest rate in one year is 1.1%. Estimate the forward LIBOR interest rate for the period between 6.00 and 6.25 years in the futures.

A. 4.47%
B. 4.57%
C. 5.66%
D. 6.36%

15. On August 1 a portfolio manager has a bond portfolio worth $10 million. The duration of the portfolio in October will be 7.1 years. The December Treasury bond futures price is currently 91-12 and the cheapest-to-deliver bond will have duration of 8.8 years at maturity. How should the portfolio manager immunize the portfolio against changes in interest rates over the next two months?

A. Long 880 contracts of Treasury bond futures

B. Short 880 contracts of Treasury bond futures

C. Long 88 contracts of Treasury bond futures

D. Short 88 contracts of Treasury bond futures

16. A hedge fund has invested USD 100 million in mortgage-backed securities. The risk manager is concerned about prepayment risk if interest rates fall. Which of the following strategies is an effective hedge against the potential loss due to a drop in interest rates?

A. Short FRA, long T-bond futures

B. Long FRA, short T-bond futures

C. Long FRA, long T-bond futures

D. Short FRA, short T-bond futures

17. A $100 million interest rate swap has a remaining life of 10 months. Under the terms of the swap, 6-month LIBOR is exchanged for 12% per annum (compounded semiannually). The average of the bid-offer rate being exchanged for 6-month LIBOR in swaps of all maturities is currently 10% per annum with continuous compounding. The 6-month LIBOR rate was 9.6% per annum 2 months ago. What is the current value of the swap to the party paying floating?

A. 0.96 million dollars

B. 1.8 million dollars

C. 1.964 million dollars

D. 2.5 million dollars

18. A currency swap has a remaining life of 15 months with pay dates at 3 and 15 months. It involves exchanging interest at 14% on £20 million for interest at 10% on $30 million once a year. The term structure of interest rates in both the United Kingdom and the United States is currently flat, and if the swap were negotiated today the interest rates exchanged would be 8% in dollars and 11% in sterling. All interest rates are quoted with annual compounding. The current exchange rate (dollars per pound sterling) is 1.6500. What is the value of the swap to the party paying dollars?

A. -4.50mil
B. -4.604 mil
C. 4.604 mil
D. 4.50 mil

19. A multinational corporation is considering issuing a fixed-rate bond. However, by using interest swaps and floating rate notes, the issuer can achieve the same objective. To do so, the issuer should consider:

A. Issuing a floating rate note of the same maturity and enter into an interest rate swap paying fixed and receiving float.
B. Issuing a floating rate note of the same maturity and enter into an interest rate swap paying float and receiving fixed.
C. Buying a floating rate note of the same maturity and enter into an interest rate swap paying fixed and receiving float.
D. Buying a floating rate note of the same maturity of and enter into an interest rate swap paying float and receiving fixed.

20. The 1-year LIBOR rate is 10%. A bank trades swaps where a fixed rate of interest is exchanged for 12-month LIBOR with payments being exchanged annually. The 2-year and 3-year swap rates are 11% and 12% per annum. Estimate the 2-year and 3-year LIBOR zero rates (expressed with continuously compounding).

A. 10.46% 11.46%
B. 11.46% 12.46%
C. 12.46% 13.46%
D. 13.46% 14.46%

21. A cash-or-nothing call (also known as a digital call) pays a fixed amount to the buyer if the asset finishes above the strike price. Assume that at the end of a 1-year investment horizon, the stock is equal to \$50, the fixed payment amount is equal to \$45, and $N(d_1)$ and $N(d_2)$ from the Black-Scholes-Merton model are equal to 0.9767 and 0.9732, respectively. The value of this cash-or-nothing call when the risk-free rate equals 3% is closest to:

A. \$5
B. \$42
C. \$44
D. \$47

22. A 4-month European call option on a dividend-paying stock is currently selling for $5. The stock price is $64, the strike price is $60, and a dividend of $0.80 is expected in 1 month. The risk-free interest rate is 12% per annum for all maturities. What opportunities are there for an arbitrageur?

A. +0.56 USD

B. -0.56 USD

C. +5.33 USD

D. +4.35 USD

23. The price of an American call on a non-dividend-paying stock is $4. The stock price is $31, the strike price is $30, and the expiration date is in 3 months. The risk-free interest rate is 8%. Derive lower and upper bounds for the price of an American put on the same stock with the same strike price and expiration date.

A. 2.55 3.31

B. 2.33 3.32

C. 2.41 3.00

D. 2.33 4.22

24. Consider a stock index currently standing at 250. The dividend yield on the index is 4% per annum, and the risk-free rate is 6% per annum. A three-month European call option on the index with a strike price of 245 is currently worth $10. What is the value of a three-month put option on the index with a strike price of 245?

A. 3.84

B. 1.35

C. 16.16

D. 5.0

25. An index currently stands at 1,500. European call and put options with a strike price of 1,400 and time to maturity of six months have market prices of 154.00 and 34.25, respectively. The six-month risk-free rate is 5%. What is the implied dividend yield?

A. 2.01%

B. 1.99%

C. 2.05%

D. 1.96%

26. A bank's position in options on the dollar/euro exchange rate has a delta of 30,000 and a

gamma of -80,000. The exchange rate (dollars per euro) is 0.90. After a short period of time, the exchange rate moves to 0.93. What is the new delta, and what trade is necessary to keep the position delta neutral? Assuming the bank did set up a delta-neutral position originally, has it gained or lost money from the exchange-rate movement?

A. 27,600, short 27600 dollars, it gained money from the exchange-rate movement.

B. 33,000, long 33000 euros, it lost money from the exchange-rate movement.

C. 27,600, short 27600 euros, it lost money from the exchange-rate movement.

D. 33,000, long 33000 dollars, it gained money from the exchange-rate movement.

27. A financial institution has the following portfolio of over-the-counter options on sterling:

Type	Position	Delta of Option	Gamma of Option	Vega of Option
Call	-1,000	0.50	2.2	1.8
Call	-500	0.80	0.6	0.2
Put	-2,000	-0.40	1.3	0.7
Call	-500	0.70	1.8	1.4

A traded option is available with a delta of 0.6, a gamma of 1.5, a vega of 0.8.

What position in the traded option and in sterling would make the portfolio both gamma neutral and delta neutral?

A. Short position in 4000 traded options, long position in 1950 sterling.

B. Long position in 4000 traded options, short position in 1950 sterling.

C. Long position in 4000 traded options, long position in 1950 sterling.

D. Short position in 4000 traded options, short position in 1950 sterling.

28. Consider a position consisting of a $100,000 investment in asset A and a $100,000 investment in asset B. Assume that the daily volatilities of both assets are 1% and that the coefficient of correlation between their returns is 0.3. What is the 5-day 99% value at risk for the portfolio?

A. 8765

B. 8425

C. 8401

D. 8300

29. A financial institution owns a portfolio of options on the US dollar-sterling exchange rate. The delta of the portfolio is 56.0. The current exchange rate is 1.5000. Derive an approximate linear relationship between the change in the portfolio value and the

percentage change in the exchange rate. If the daily volatility of the exchange rate is 0.7%, estimate the 10-day 99% VaR.

A. 4.33

B. 3.66

C. 5.36

D. 4.69

Given the following information to answer the question 30 and question 31:

Consider a position consisting of a $300,000 investment in gold and a $500,000 investment in silver. Suppose that the daily volatilities of these two assets are 1.8% and 1.2%, respectively, and that the coefficient of correlation between their returns is 0.6.

30. What is the 10-day 97.5% VaR for the portfolio?

A. 63220

B. 65320

C. 69856

D. 56983

31. By how much does diversification reduce the VaR?

A. 7756

B. 7569

C. 7546

D. 7438

32. Which of the following four statements on models for estimating volatility is incorrect?

A. In the EWMA model, some positive weight is assigned to the long-run average variance rate.

B. In the EWMA model, the weights assigned to observations decrease exponentially as the observations become older.

C. In the GARCH(1,1) model, a positive weight is estimated for the long-run average variance rate.

D. In the GARCH(1,1) model, the weights estimated for observations decrease exponentially as the observations become older.

33. Vega is the sensitivity of an option's price to changes in volatility. Increases in an underlying instrument's volatility will usual increase the value of options since increases in volatility produce a greater probability that an option will find its way into

the money. Of the four options listed below, which investment has the potential to produce a negative vega measure?

A. Shout option

B. Call option

C. Put option

D. Barrier option

34. The current price of stock ABC is $42 and the call option with a strike at $44 is trading at $3. Expiration is in one year. The corresponding put is priced at $2. Which of the following trading strategies will result in arbitrage profits? Assume that the risk-free rate is 10% and that the risk-free bond can be shorted costlessly. There are no transaction costs.

A. Long position in both the call option and the stock, and short position in the put option and risk-free bond.

B. Long position in both the call option and the put option, and short position in the stock and risk-free bond.

C. Long position in both the call option and the risk-free bond, and short position in the stock and the put option.

D. Long position in both the put option and the risk-free bond, and short position in the stock and the call option.

35. Regarding the following four statements, which are correct about the early exercise of American options on non-dividend-paying stocks?

I. It is never optimal to exercise an American call option early.

II. It can be optimal to exercise an American put option early.

III. It can be optimal to exercise an American call option early.

IV. It is never optimal to exercise an American put option early.

A. I and II

B. I and IV

C. II and III

D. III and IV

36. In late 1993, MGRM reported losses of about $1.3 billion in connection with the implementation of a hedging strategy in the oil futures market. In 1992, the company had begun a new strategy to sell petroleum to independent retailers at fixed prices above the prevailing market price for periods of up to 10 years. At the same time, MGRM

implemented a hedging strategy using a large number of short-term derivative contracts such as swaps and futures on crude oil. This led to a timing (maturity) mismatch between the short-term hedges and the long-term liability. Unfortunately, the company suffered significant losses with its hedging strategy when oil market conditions abruptly changed to:

A. Contango, which occurs when the futures price is above the spot price.
B. Contango, which occurs when the futures price is below the spot price.
C. Normal backwardation, which occurs when the futures price is above the spot price.
D. Normal backwardation, which occurs when the futures price is below the spot price.

37. Jeremy Jackson is a portfolio manager who is summarizing the risks associated with mortgages and mortgage-backed securities in a quarterly report. Which of the following statements in his report is correct?

A. There is little risk associated with declining interest rates on a pool of residential mortgages because default risk is much less likely in this environment.
B. The percentage of the pool that is paying on time in relation to those who are delaying payments is known as the severity measure.
C. The PSA prepayment benchmark assumes that the monthly prepayment rate for a mortgage pool decreases as it ages.
D. Delinquency is one important credit risk measure for a pool of mortgages.

38. An analyst is evaluating the performance of a portfolio of Mexican equities that is benchmarked to the IPC Index. The analyst collects the information about the portfolio and the benchmark index shown in the table below:

Expected return on the portfolio	6.6%
Volatility of returns on the portfolio	13.1%
Expected return on the IPC Index	4.0%
Volatility of returns on the IPC Index	8.7%
Risk-free rate of return	1.5%
Beta of portfolio relative to IPC Index	1.4

What is the Sharpe ratio for this portfolio?

A. 0.036
B. 0.047
C. 0.389

D. 0.504

39. Assume that a random variable follows a normal distribution with a mean of 80 and a standard deviation of 24. What percentage of this distribution is between 32 and 116?

A. 4.56%

B. 8.96%

C. 95.44%

D. 91.04%

Reference Table: Let Z be a standard normal random variable.

z	P(Z<z)	z	P(Z<z)	z	P(Z<z)	z	P(Z<z)	z	P(Z<z)	z	P(Z<z)
-3	0.0013	-2.50	0.0062	-2.00	0.0228	-1.50	0.0668	-1.00	0.1587	-0.50	0.3085
-2.99	0.0014	-2.49	0.0064	-1.99	0.0233	-1.49	0.0681	-0.99	0.1611	-0.49	0.3121
-2.98	0.0014	-2.48	0.0066	-1.98	0.0239	-1.48	0.0694	-0.98	0.1635	-0.48	0.3156
-2.97	0.0015	-2.47	0.0068	-1.97	0.0244	-1.47	0.0708	-0.97	0.1660	-0.47	0.3192
-2.96	0.0015	-2.46	0.0069	-1.96	0.0250	-1.46	0.0721	-0.96	0.1685	-0.46	0.3228
-2.95	0.0016	-2.45	0.0071	-1.95	0.0256	-1.45	0.0735	-0.95	0.1711	-0.45	0.3264
-2.94	0.0016	-2.44	0.0073	-1.94	0.0262	-1.44	0.0749	-0.94	0.1736	-0.44	0.3300
-2.93	0.0017	-2.43	0.0075	-1.93	0.0268	-1.43	0.0764	-0.93	0.1762	-0.43	0.3336
-2.92	0.0018	-2.42	0.0078	-1.92	0.0274	-1.42	0.0778	-0.92	0.1788	-0.42	0.3372
-2.91	0.0018	-2.41	0.0080	-1.91	0.0281	-1.41	0.0793	-0.91	0.1814	-0.41	0.3409
-2.9	0.0019	-2.40	0.0082	-1.90	0.0287	-1.40	0.0808	-0.90	0.1841	-0.40	0.3446
-2.89	0.0019	-2.39	0.0084	-1.89	0.0294	-1.39	0.0823	-0.89	0.1867	-0.39	0.3483
-2.88	0.0020	-2.38	0.0087	-1.88	0.0301	-1.38	0.0838	-0.88	0.1894	-0.38	0.3520
-2.87	0.0021	-2.37	0.0089	-1.87	0.0307	-1.37	0.0853	-0.87	0.1922	-0.37	0.3557
-2.86	0.0021	-2.36	0.0091	-1.86	0.0314	-1.36	0.0869	-0.86	0.1949	-0.36	0.3594
-2.85	0.0022	-2.35	0.0094	-1.85	0.0322	-1.35	0.0885	-0.85	0.1977	-0.35	0.3632
-2.84	0.0023	-2.34	0.0096	-1.84	0.0329	-1.34	0.0901	-0.84	0.2005	-0.34	0.3669
-2.83	0.0023	-2.33	0.0099	-1.83	0.0336	-1.33	0.0918	-0.83	0.2033	-0.33	0.3707
-2.82	0.0024	-2.32	0.0102	-1.82	0.0344	-1.32	0.0934	-0.82	0.2061	-0.32	0.3745
-2.81	0.0025	-2.31	0.0104	-1.81	0.0351	-1.31	0.0951	-0.81	0.2090	-0.31	0.3783
-2.8	0.0026	-2.30	0.0107	-1.80	0.0359	-1.30	0.0968	-0.80	0.2119	-0.30	0.3821
-2.79	0.0026	-2.29	0.0110	-1.79	0.0367	-1.29	0.0985	-0.79	0.2148	-0.29	0.3859
-2.78	0.0027	-2.28	0.0113	-1.78	0.0375	-1.28	0.1003	-0.78	0.2177	-0.28	0.3897
-2.77	0.0028	-2.27	0.0116	-1.77	0.0384	-1.27	0.1020	-0.77	0.2206	-0.27	0.3936
-2.76	0.0029	-2.26	0.0119	-1.76	0.0392	-1.26	0.1038	-0.76	0.2236	-0.26	0.3974
-2.75	0.0030	-2.25	0.0122	-1.75	0.0401	-1.25	0.1056	-0.75	0.2266	-0.25	0.4013

40. When testing a hypothesis, which of the following statements is correct when the level of significance of the test is decreased?

A. The likelihood of rejecting the null hypothesis when it is true decreases.

B. The likelihood of making a type 1 error increases.

C. The null hypothesis is rejected more frequently, even when it is actually false.

D. The likelihood of making a type 2 error decreases.

41. A portfolio manager is interested in the systematic risk of a stock portfolio, so he estimates the linear regression: $R_{Pt} - R_F = \alpha_P + \beta_P (R_{Mt} - R_F) + \varepsilon_{Pt}$ where R_{Pt} is the return of the portfolio at time t, R_{Mt} is the return of the market portfolio at time t, and R_F

is the risk-free rate, which is constant over time. Suppose that $\alpha = 0.008$, $\beta = 0.977$, $\sigma(R_P) = 0.167$ and $\sigma(R_M) = 0.156$.

What is the approximate coefficient of determination in this regression?

A. 0.913

B. 0.834

C. 0.977

D. 0.955

42. You built linear regression model to analyze annual salaries for a developed country. You incorporated two independent variables, age and experience, into your model. Upon reading the regression results, you notice that the coefficient of experience is negative, which appears to be counterintuitive. In addition, you discover that the coefficients have low t-statistics but the regression model has a high R^2. What is the most likely cause of these results?

A. Incorrect standard errors

B. Heteroskedasticity

C. Serial correlation

D. Multicollinearity

43. The first three US Treasury bonds listed below are the "base bonds": they inform the market's efficient discount function up to 1.5 years, with semi-annual compounding:

Selected US Treasury Bond Prices

(Base Bonds → Discount Function)

Prices as of May 31,2013

Coupon	Maturity	Price
4.0%	11/30/2013	$101.00
5.0%	5/31/2014	$102.50
6.0%	11/30/2014	$102.40

Mis-priced US T-bond

2.0%	11/30/2014	$99.00

We also observe a 1.5 year Treasury bond (matures on 11/30/2014) with a 2.0% coupon that is mispriced at $99.00. If we use the three base bonds to replicate a portfolio with identical cash flows (i.e., identical to the mispriced 2.0% bond), in order to exploit the arbitrage opportunity (assume no transaction costs), what is the trade with respect to the base 6.0% 11/30/2014 bond?

A. Sell 0.9320 face amount of the 6.0% 11/30/14 T-bond for a receipt of $95.33

B. Sell 1.0472 face amount of the 6.0% 11/30/14 T-bond for a receipt of $113.20

C. Buy 0.9806 face amount of the 6.0% 11/30/14 T-bond at a cost of $100.41

D. Buy 0.9740 face amount of the 6.0% 11/30/14 T-bond at a cost of $96.43

44. Suppose σ_t^2 is the estimated variance at time t and μ_t is the realized return at t. Which of the following GARCH(1,1) models will take the longest time to revert to its mean?

A. $\sigma_t^2 = 0.04 + 0.02\mu_{t-1}^2 + 0.92\sigma_{t-1}^2$

B. $\sigma_t^2 = 0.02 + 0.04\mu_{t-1}^2 + 0.94\sigma_{t-1}^2$

C. $\sigma_t^2 = 0.03 + 0.02\mu_{t-1}^2 + 0.95\sigma_{t-1}^2$

D. $\sigma_t^2 = 0.03 + 0.03\mu_{t-1}^2 + 0.93\sigma_{t-1}^2$

45. Which of the following statements is incorrect regarding the volatility term structure predicted by a GARCH(1,1) model: $\sigma_t^2 = \omega + \alpha\mu_{t-1}^2 + \beta\sigma_{t-1}^2$, where $\alpha + \beta < 1$?

A. When the current volatility estimate is below the long-run average volatility, this GARCH model estimates an upward-sloping volatility term structure.

B. When the current volatility estimate is above the long-run average volatility, this GARCH model estimates a downward-sloping volatility term structure.

C. Assuming the long-run estimated variance remains unchanged as the GARCH parameters α and β increase, the volatility term structure predicted by this GARCH model reverts to the long-run estimated variance more slowly.

D. Assuming the long-run estimated variance remains unchanged as the GARCH parameters α and β increase, the volatility term structure predicted by this GARCH model reverts to the long-run estimated variance faster.

46. Analyst Joseph Lockwood examines a single-factor regression for a hedge fund and makes the following two statements:

Statement 1: Heteroskedasticity exists if the regression residuals are correlated with their lagged values.

Statement 2: Hereroskedasticity causes the t-statistics of the regression to be incorrectly calculated using ordinary least squares methods.

Which of Lockwood's claims are correct?

A. Statement 1 is correct and Statement 2 is correct.

B. Statement 1 is correct and Statement 2 is incorrect.

C. Statement 1 is incorrect and Statement 2 is correct.

D. Statement 1 is incorrect and Statement 2 is incorrect.

47. Jenny Caldwell, FRM, is using a moving average model in which she assumes weights decline exponentially back through time. The original volatility was calculated at 1.5%. However, she believes a decay factor of 0.96 for an exponentially weighted moving average (EWMA) model is appropriate for modeling a more realistic variance measure. If the stock market return is 1% today, what is the new estimate of volatility using the EWMA model?

A. 0.97%

B. 1.31%

C. 1.48%

D. 1.58%

48. James Tulsma, FRM, is analyzing a publicly traded firm and is using the company's beta, the risk-free rate of return, and the expected return on the market to estimate the company's required rate of return. He is somewhat concerned that the underlying assumptions of this technique are not realistic. Which of the following statements is an assumption of the capital asset pricing model (CAPM)?

A. Investors minimize their expected utility of wealth at the end of the period.

B. Investors are risk-neutral.

C. Investors are only concerned with the mean and standard deviation of returns.

D. Assets are not divisible.

49. An analyst is concerned that the trading strategy she recently identified has generated a statistically insignificant result and has asked for guidance in assessing the strategy. A result is statistically significant if it is:

A. Unlikely to have occurred merely by chance, and the p-value is less than the significance level.

B. Likely to have occurred merely by chance, and the p-value is less than the significance level.

C. Unlikely to have occurred merely by chance, and the p-value is greater than the significance level.

D. Likely to have occurred merely by chance, and the p-value is greater than the significance level.

50. If a pool of mortgage loans begins the month with a balance of$10,500,000, has a scheduled

principal payment of $54,800, and ends the month with a balance of $9,800,000, what is the CPR for this month?

A. 6.177%

B. 42.240%

C. 53.472%

D. 66.670%

51. Howard Parks, FRM, is an investor with a short position and is preparing to deliver a bond for this position. The bond to purchase for delivery is based on a settlement price of $98.03 (also known as the quoted futures price). Which of the following four bonds is cheapest-to-deliver?

Bond	Quoted Bond Price	Conversion Factor
A	103	1.03
B	116	1.12
C	105	1.07
D	124	1.23

A. Bond A

B. Bond B

C. Bond C

D. Bond D

52. With respect to mortgage-backed securities, and assuming market rates are below the mortgage rate in the pool, a decrease in interest rates would most likely cause:

A. Interest-only (IO) strips to decrease in value.

B. Principal-only (PO) strips to decrease in value.

C. IO and PO strips to increase in value.

D. IO and PO strips to decrease in value.

53. A Canadian-based tire company is due a $2,500,000 SGD payment from its Singapore-based distributor in two months. The Canadian firm hedges the exchange rate risk using a forward contract priced at $0.80 CAD/SGD. If the Singapore dollar depreciates over the next two months to a spot rate of $0.73 CAD/SGD, how much more or less will the Canadian-based tire firm receive in Canadian dollars by hedging, versus an unhedged position?

A. $175,000 CAD more

B. $175,000 CAD less

C. $70,000 CAD more

D. $29,167 SGD less

54. Which of the following statements is correct regarding the use of the F-test and the F-statistic?

I. For simple linear regression, the F-test tests the same hypothesis as the t-test.

II. The F-statistic is used to find which items in a set of independent variables explain a significant portion of the variation of the dependent variable.

A. I only.

B. II only.

C. Both I and II.

D. Neither I nor II.

55. An investor wishes to compute the exchange rate of a 7-month futures contract on the Swiss franc. Each contract controls 125,000 Swiss francs and is quoted in terms of dollar/franc. Suppose the current exchange rate is 1.02 dollar/franc. What is the 7-month futures exchange rate assuming a continuously compounded risk-free rate in Switzerland of 2% and a continuously compounded risk-free rate in the U.S. of 1%?

A. 0.987 dollar/franc

B. 1.002 dollar/franc

C. 1.014 dollar/franc

D. 1.225 dollar/franc

56. Suppose there are two events A and B. The probability of A occurance equals that of B. P(AB)=4%, if event A occurred, the probability of B occurs is 80%. What is the probability of neither occurs?

A. 86%

B. 90%

C. 94%

D. 96%

57. Assume that portfolio daily returns are independent and identically normally distributed. Sam Neil, a new quantitative analyst, has been asked by the portfolio manager to calculate portfolio VaRs over 10, 15, 20, and 25 days. The portfolio manager notices something amiss with Sam's calculations, displayed here. Which one of the following VaRs on this portfolio is inconsistent with the others?

A. VaR(10-day) = USD 316M
B. VaR(15-day) = USD 465M
C. VaR(20-day) = USD 537M
D. VaR(25-day) = USD 600M

58. Which of the following statements is/are true with respect to basis risk?

I. Basis risk arises in cross-hedging strategies, but there is no basis risk when the underlying asset and hedge asset are identical.
II. A short hedge position benefits from unexpected strengthening of basis.
III. A long hedge position benefits from unexpected strengthening of basis.

A. I and II
B. I and III
C. II only
D. III only

59. XYZ Co. is a gold producer and will sell 10,000 ounces of gold in three months at the prevailing market price at that time. The standard deviation of the change in the price of gold over a three-month period is 3.6%. In order to hedge its price exposure, XYZ Co. decides to use gold futures to hedge. The contract size of each gold futures contract is 10 ounces. The standard deviation of the gold futures price is 4.2%. The correlation between quarterly changes in the futures price and the spot price of gold is 0.86. To hedge its price exposure, how many futures contracts should XYZ Co. go long or short?

A. Short 632 contracts
B. Short 737 contracts
C. Long 632 contracts
D. Long 737 contracts

60. Looking at a risk report, Mr. Woo finds that the options book of Ms. Yu has only long positions and yet has a negative delta. He asks you to explain how that is possible. What is a possible explanation?

A. The book has a long position in up-and-in call options.
B. The book has a long position in binary options.
C. The book has a long position in up-and-out call options.
D. The book has a long position in down-and-out call options.

61. A junior credit risk analyst at a US firm is preparing a research report on the attributes and

investment performance of corporate bonds. In analyzing corporate bond default rates, credit-spread risk, recovery rates, and their impact on portfolio returns for a typical class of investment grade bonds, which of the following is correct?

A. The distribution of recovery rates of corporate issues is best described as a binomial distribution.

B. The size of a bond issuance is not empirically related to its recovery rates.

C. Measured over the same time period, US Treasury securities always outperform a portfolio of corporate bonds that experiences defaults.

D. Spread duration is best measured by the change in the corporate bond yield for a given 100 bp change in the Treasury rate.

62. Ms. Zheng is responsible for the options desk in a London bank. She is concerned about the impact of dividends on the options held by the options desk. She asks you to assess which options are the most sensitive to dividend payments. What would be your answer if the value of the options is found by using the Black-Scholes model adjusted for dividends?

A. Everything else equal, out-of-the-money call options experience a larger decrease in value than in-the-money call options as expected dividends increase.

B. The increase in the value of in-the-money put options caused by an increase in expected dividends is always larger than the decrease in value of in-the-money call options.

C. Keeping the type of option constant, in-the-money options experience the largest absolute change in value and out-of-the-money options the smallest absolute change in value as expected dividends increase.

D. Keeping the type of option constant, at-the-money options experience the largest absolute change in value and out-of-the-money options the smallest absolute change in value as a result of dividend payment.

63. An investor is long a short-term at-the-money put option on an underlying portfolio of equities with a notional value of USD 100,000. If the 95% VaR of the underlying portfolio is 10.4%, which of the following statements about the VaR of the option position is correct when second-order terms are considered?

A. The VaR of the option position is slightly more than USD 5,200.

B. The VaR of the option position is slightly more than USD 10,400.

C. The VaR of the option position is slightly less than USD 5,200.

D. The VaR of the option position is slightly less than USD 10,400.

64. The following GARCH(1,1) model is used to forecast the daily return variance of an asset:

$$\sigma_n^2 = 0.000005 + 0.05\mu_{n-1}^2 + 0.92\sigma_{n-1}^2$$

Suppose the estimate of the volatility today is 5.0% and the asset return is -2.0%. What is the estimate of the long-run average volatility per day?

A. 1.29%

B. 1.73%

C. 1.85%

D. 1.91%

65. John is forecasting a stock's price in 2011 conditional on the progress of certain legislation in the United States Congress. He divides the legislative outcomes into three categories of "Passage", "Stalled" and "Defeated" and the stock's performance into three categories of "increase", "constant" and "decrease" and estimates the following events:

	Passage	**Stalled**	**Defeated**
Probability of legislative outcome	20%	50%	30%
Probability of increase in stock price given legislative outcome	10%	40%	70%
Probability of decrease in stock price given legislative outcome	60%	30%	10%

A portfolio manager would like to know that if the stock price does not change in 2011. Based on John's estimates, what the probability that the legislation passed is?

A. 15.5%

B. 19.6%

C. 22.2%

D. 38.7%

66. A portfolio manager has a bond position worth USD 100 million. The position has a modified duration of 8 years and a convexity of 150 years. Assume that the term structure is flat. By how much does the value of the position change if interest rates increase by 25 basis points?

A. USD -1,953,125

B. USD -1,906,250

C. USD -2,046,875

D. USD -2,187,500

67. After evaluating the results of a firm's stress tests, an analyst is recommending that the firm allocate additional economic capital and purchase selective insurance protection to guard against particular events. In order to give management a fully informed assessment, it is important that the following is noted related to this strategy:

A. While decreasing liquidity risk exposure, it will likely increase market risk exposure.

B. While decreasing correlation risk exposure, it will likely increase credit risk exposure.

C. While decreasing market risk exposure, it will likely increase credit risk exposure.

D. While decreasing credit risk exposure, it will likely increase model risk exposure.

68. An analyst wants to price a 1-year, European-style call option on company CZC's stock using the Black-Scholes-Merton (BSM) model. CZC announces that it will pay a dividend of USD 0.50 per share on an ex-dividend date 1 month from now and has no further dividend payout plans for at least 1 year. The relevant information for the BSM model inputs are in the following table.

Current stock price	USD40
Stock price volatility	16% per year
Risk-free rate	3% per year
Call option exercise price	USD 40
N(d1)	0.5750
N(d2)	0.5116

What is the price of the 1-year call option on the stock?

A. USD 1.52

B. USD 1.78

C. USD 1.95

D. USD 2.85

69. A bank had entered into a 3-year interest rate swap for a notional amount of USD 300 million, paying a fixed rate of 7.5% per year and receiving LIBOR annually. Just after the payment was made at the end of the first year, the continuously compounded 1-year and 2-year annualized LIBOR rates were 7% per year and 8% per year, respectively. The value of the swap at that time was closest to which of the following choices?

A. USD -14 million

B. USD -4 million

C. USD 4 million

D. USD 14 million

70. On Nov 1, Jimmy Walton, a fund manager of an USD 60 million US medium-to-large cap equity portfolio, considers locking up the profit from the recent rally. The S&P 500 index and its futures with the multiplier of 250 are trading at USD 900 and USD 910, respectively. Instead of selling off his holdings, he would rather hedge two-thirds of his market exposure over the remaining 2 months. Given that the correlation between Jimmy's portfolio and the S&P 500 index futures is 0.89 and the volatilities of the equity fund and the futures are 0.51 and 0.48 per year respectively, what position should he take to achieve his objective?

A. Sell 250 futures contracts of S&P 500
B. Sell 169 futures contracts of S&P 500
C. Sell 167 futures contracts of S&P 500
D. Sell 148 futures contracts of S&P 500

71. An analyst is examining a portfolio that consists of 600 subprime mortgages and 400 prime mortgages. Of the subprime mortgages, 120 are late on their payments. Of the prime mortgages, 40 are late on their payments. If the analyst randomly selects a mortgage from the portfolio and it is currently late on its payments, what is the probability that it is a subprime mortgage?

A. 60%
B. 67%
C. 75%
D. 80%

72. An investor sells a June 2008 call of ABC Limited with a strike price of USD 45 for USD 3 and buys a June 2008 call of ABC Limited with a strike price of USD 40 for USD 5. What is the name of this strategy and the maximum profit and loss the investor could incur?

A. Bear Spread, Maximum Loss USD 2, Maximum Profit USD 3
B. Bull Spread, Maximum Loss Unlimited, Maximum Profit USD 3
C. Bear Spread, Maximum Loss USD 2, Maximum Profit Unlimited
D. Bull Spread, Maximum Loss USD 2, Maximum Profit USD 3

73. A risk manager for bank XYZ, Mark is considering writing a 6-month American put option on a non-dividend paying stock ABC. The current stock price is USD 50 and the strike price of the option is USD 52. In order to find the no-arbitrage price of the option, Mark uses a two-step binomial tree model. The stock price can go up or down by 20% each period. Mark's view is that the stock price has an 80% probability of going up each period and a 20%

probability of going down. The risk-free rate is 12% per annum with continuous compounding. What is the risk-neutral probability of the stock price going up in a single step?

A. 34.5%

B. 57.6%

C. 65.5%

D. 80.0%

74. Which of the following statements is incorrect, given the following one-year rating transition matrix?

From/To (%)	AAA	AA	A	BBB	BB	B	CCC/C	D	Non Rated
AAA	87.44	7.37	0.46	0.09	0.06	0,00	0.00	0.00	4.59
AA	0.60	86.65	7.78	0.58	0.06	0.11	0.02	0.01	4.21
A	0.05	2.05	86.96	5.50	0.43	0.16	0.03	0.04	4.79
BBB	0.02	0.21	3.85	84.13	4.39	0.77	0.19	0.29	6.14
BB	0.04	0.08	0.33	5.27	75.73	7.36	0.94	1.20	9.06
B	0.00	0.07	0.20	0.28	5.21	72.95	4.23	5.71	11.36
CCC/C	0.08	0.00	0.31	0.39	1.31	9.74	46.83	28.83	12.52

A. BBB loans have a 4.08% chance of being upgraded in one year.

B. BB loans have a 75.73% chance of staying at BB for one year.

C. BBB loans have an 88.21% chance of being upgraded in one year.

D. BB loans have a 5.72% chance of being upgraded in one year.

75. An investment advisor is advising a wealthy client of the company. The client would like to invest USD 500,000 in a bond rated at least AA. The advisor is considering bonds issued by Company X, Company Y, and Company Z, and wants to choose a bond that satisfies the client's rating requirement, but also has the highest yield to maturity. The advisor has gathered the following information:

	X	Y	Z
Bond rating	AA+	A+	AAA
Semiannual Coupon	3.5%	3.56%	3.38%
Term to Maturity in years	5	5	5
Price(USD)	975	973	989
Par Value(USD)	1000	1000	1000

Which bond should the investment advisor purchase for the client?

A. Y bond

B. X bond

C. Z bond

D. Either the Z bond or the Y bond

76. John is forecasting a stock's performance in 2010 conditional on the state of the economy of the country in which the firm is based. He divides the economy's performance into three categories of "GOOD", "NEUTRAL" and "POOR" and the stock's performance into three categories of "increase", "constant" and "decrease".

He estimates:

- The probability that the state of the economy is GOOD is 20%. If the state of the economy is GOOD, the probability that the stock price increases is 80% and the probability that the stock price decreases is 10%.
- The probability that the state of the economy is NEUTRAL is 30%. If the state of the economy is NEUTRAL, the probability that the stock price increases is 50% and the probability that the stock price decreases is 30%.
- If the state of the economy is POOR, the probability that the stock price increases is 15% and the probability that the stock price decreases is 70%.

Billy, his supervisor, asks him to estimate the probability that the state of the economy is NEUTRAL given that the stock performance is constant. John's best assessment of that probability is closest to:

A. 15.5%

B. 19.6%

C. 20.0%

D. 38.7%

77. In the case of Barings Bank (Barings), Nick Leeson incurred huge trading losses. Which of the following statements correctly describes one of the factors that led to the bankruptcy of Barings?

A. Barings had insufficient liquidity to cover marked to market losses.

B. Leeson used a long straddle strategy on the Nikkei 225.

C. Leeson held speculative double short positions in the market for Nikkei 225 futures contracts.

D. There was ambiguity concerning who was responsible for performing specific oversight functions.

78. WEB, an investment-banking firm, is the principal underwriter for MTEX's upcoming

debenture issue. Lynn Black, FRM, is an analyst with WEB, and she learned from an employee in MTEX's programming department that a serious problem was recently discovered in the software program of its major new product line. In fact, the problem is so bad that many customers have canceled their orders with MTEX. Black checked the debenture's prospectus and found no mention of this development. The red herring prospectus has already been distributed. According to the GARP Code of Conduct, Black's best course of action is to:

A. Inform her immediate supervisor at WEB of her discovery.
B. Keep quiet because this is material nonpublic inside information.
C. Notify potential investors of the omission on a fair and equitable basis.
D. Report her discovery to the Division of Corporation Finance of the Securities and Exchange Commission.

79. A butterfly spread can be created by buying:

A. A call option with a low strike price and then selling a call option with a higher strike price.
B. A put option with a high strike price and then selling a put option with a lower strike price.
C. A put option with a low strike price, buying another put option with a higher strike price, and selling two put options with a strike price halfway between the low and high strike options.
D. A call option with a high strike price, buying another call option with a higher strike price, and two call options with a strike price halfway between the low and high strike options.

80. A stack-and-roll hedge as described in the Metallgesellschaft case is best described as:

A. Buying futures contracts of different expirations and allowing them to expire in sequence.
B. Buying futures contracts of different expirations and closing out the position shortly before expiration.
C. Using short-term futures to hedge a long-term risk exposure by replacing them with longer-term contracts shortly before they expire.
D. Using short-term futures contracts with a larger notional value than the long-term risk they are meant to hedge.

81. Which of the following statements are TRUE?

I The convexity of a 10-year zero coupon bond is higher than the convexity of a 10-year, 6% bond.

II The convexity of a 10-year zero coupon bond is higher than the convexity of a 6% bond with a duration of 10 years.

III Convexity grows proportionately with the maturity of the bond.

IV Convexity is always positive for all types of bonds.

V Convexity is always positive for "straight" bonds.

A. I only

B. I and II only

C. I and V only

D. II, III, and V only

82. Two companies, C and D, have the borrowing rates shown in the following table.

Borrowing Rates for C and D		
Company	Fixed Borrowing	Floating Borrowing
C	10%	LIBOR+50bps
D	12%	LIBOR+100bps

According to the comparative advantage argument, what is the total potential savings for C and D if they enter into an interest rate swap?

A. 0.5%

B. 1.0%

C. 1.5%

D. 2.0%

83. On January 1, a risk manager observes that the one-year continuously compounded interest rate is 5% and storage costs of a commodity product A is USD 0.05 per quarter (payable at each quarter end). He further observes the following forward prices for product A:

March	USD5.35
June	USD5.90
September	USD5.30
December	USD5.22

Given the following explanation of supply and demand for commodity product A, how would you best describe its forward price curve form June to December?

A. Backwardation as the supply of product A is expected to decline after summer.

B. Contango as the supply of product A is expected to decline after summer.

C. Contango as there is excess demand for product A in early summer.

D. Backwardation as there is excess demand for product A in early summer.

84. Consider the following statements about bond reinvestment risk and bond duration interest rate risk:

I. Lower bond reinvestment implies higher interest rate risk (duration).

II. Due to reinvestment risk, the yield-to-maturity on a bond is unlikely to equal the bond's realized return.

III. Reinvestment risk is eliminated in a zero-coupon bond.

Which of the above statements is (are) true?

A. I only

B. I and II

C. II and III

D. All three

85. Hedging models at Long-Term Capital Management accounted for the:

I. spike in correlations among asset class prices during times of economic crisis.

II. dependence of catastrophic events through time during global economic shocks.

A. I only.

B. II only.

C. Both I and II.

D. Neither I nor II.

86. A portfolio contains three independent bonds each with identical (i.i.d.) $100 par value, 3.0% probability of default (EDF) and loss given default (LGD) of 100%. What is, respectively, the 95.0% confident and 99.0% confident portfolio value at risk (VaR)?

A. zero and zero at both 95% and 99%

B. $100 and $100 at both 95% and 99%

C. $200 at 95% and $300 at 99%

D. $285 at 95% and $300 at 99%

87. Over the next year, a operational process model predicts an 95% probability of no loss occurrence and a 5% probability of a single loss occurrence. If the single loss occurs, the severity is characterized by three possible outcomes: $10.0 million loss with 20% probability, $18.0 million loss with 50% probability, and $25.0 million loss with 30% probability. What is the model's one-year 90% expected shortfall (ES)?

A. $9.25 million

B. $10.00 million

C. $13.88 million

D. $18.50 million

88. A bank has a $10 million commitment (COM) of which $6 million is outstanding (OS) and the usage given default (UGD) assumption is 50.0%. The probability of default (PD) is 1.0% and the loss conditional on default (LGD) has a beta distribution with a mean of 70.0% and a standard deviation of 25.0%. The PD and LGD are not independent; rather, PD and LGD are positively correlated. What is the expected loss (EL) of the adjusted exposure (AE)?

A. Less than $56,000

B. $56,000

C. More than $56,000

D. $112,000

89. An exposure has a default probability (PD) of 4.0% and loss given default of 50.0%. The standard deviation of the LGD is 25.0%. What is the ratio of the unexpected loss to the expected loss, UL/EL?

A. 1.33

B. 3.72

C. 5.50

D. 9.64

90. Assume that options on a non dividend paying stock with price of USD 100 have a time to expiry of half a year and a strike price of USD 110. The risk-free rate is 10%. Further, $N(d_1) = 0.457185$ and $N(d_2) = 0.374163$, which of the following values is closest to the Black-Scholes values of these option?

A. Value of American call option is USD 6.56 and of American put option is USD 12.0

B. Value of American call option is USD 5.50 and of American put option is USD 12.0

C. Value of American call option is USD 6.56 and of American put option is USD 10.0

D. Value of American call option is USD 5.50 and of American put option is USD 10.0

91. The forward rate of a 3-month EUR/USD foreign exchange contract is 1.1565USD per EUR. EUR LIBOR is 4% and USD LIBOR is 2%. The spot USD per EUR exchange rate is closest to:

A. 1.1336

B. 1.1507

C. 1.1623

D. 1.1799

92. For an option-free bond, which of the following are the effects of the convexity adjustment on the magnitude (absolute value) of the approximate bond price change in response to an increase in yield and in response to a decrease in yield, respectively?

	Decrease in Yield	Increase in Yield
A.	Increase in magnitude	Decrease in magnitude
B.	Increase in magnitude	Increase in magnitude
C.	Decrease in magnitude	Decrease in magnitude
D.	Decrease in magnitude	Increase in magnitude

93. Samantha Fore, FRM, is examining foreign asset-liability positions that are mismatched in individual currencies at regional financial institutions. Fore is specifically looking at the overall currency exposure of the western region consisting of three banks: Mountain West、First Interstate, and Glacier Bank. Given the uncertainty in non-U.S. markets, Fore is concerned about a euro collapse.

	Mountain West	**First Interstate**	**Glacier Bank**
EUR Assets	1,350,000	500,000	875,000
EUR Liabilities	2,000,000	400,000	1,550,000
EUR Bought	275,000	150,000	2,450,000
EUR Sold	650,000	375,000	1,875,000

On an aggregate basis, how would this region's euro exposure be characterized?

A. The aggregate euro exposure faces the risk that the euro will rise in value against the domestic currency.

B. The aggregate euro exposure faces the risk that the euro will fall in value against the domestic currency.

C. The banks, collectively, are net long euros.

D. The banks, collectively, are close to evenly matched and face little euro exposure.

94. A distribution of returns that has a greater percentage of small deviations from the mean and a greater percentage of extremely large deviations from the mean:

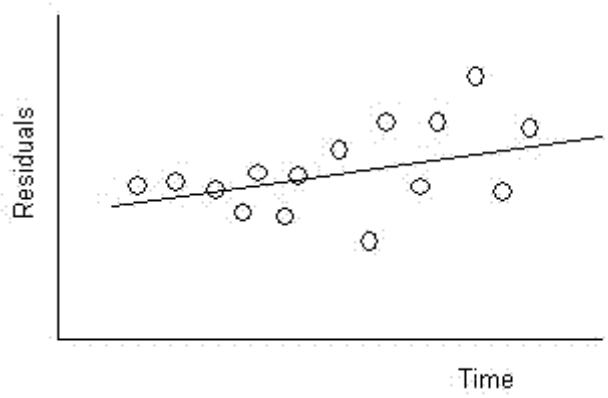
A. is positively skewed.

B. is a symmetric distribution.

C. has positive excess kurtosis.

D. has negative excess kurtosis.

95. Consider the following graph of residuals and the regression line from a time-series regression:



These residuals exhibit the regression problem of:

A. homoskedasticity

B. autocorrelation

C. heteroskedasticity

D. multicolinearity

96. The six-month forward price of commodity X is USD 1,000. Six-month, risk-free, zero-coupon bonds with face value USD 1,000 trade in the fixed income market. When taken in the correct amounts, which of the following strategies creates a synthetic long position in commodity X for a period of 6 months?

A. Short the forward contract and short the zero-coupon bond.

B. Short the forward contract and buy the zero-coupon bond.

C. Buy the forward contract and short the zero-coupon bond.

D. Buy the forward contract and buy the zero-coupon bond.

97. Regarding funding liquidity and market liquidity, which of the following statements is correct?

A. The use of a purchased asset as collateral to borrow money against is referred to as market liquidity.

B. A decline in a source of funding has the same effect as a decrease in margin.

C. A loss spiral is a negative function of market liquidity.

D. In a margin spiral, a trader initiates a sale to maintain the leverage ratio (i.e., constant margins).

98. Which of the following statements is/are most accurate regarding hedge fund performance reporting?

I. When a hedge fund's performance is recorded in an index, all of its prior results are also included.

II. Hedge funds are permitted to self-select if their performance is reported in index averages.

A. Only I.

B. Only II.

C. Both I and II.

D. Neither I nor II.

99. Given λ of 0.94, under an infinite series, what is the weight assigned to the seventh prior daily squared return?

A. 4.68%

B. 4.40%

C. 4.14%

D. 3.89%

100. Which of the following criteria is consistency ?

A. Mean squared error (MSE)

B. Unbiased mean squared error (s^2)

C. Akaike information criterion (AIC)

D. Schwarz information criterion (SIC)