Question #1 of 74

Historically, which of the following asset classes has exhibited the smallest standard deviation of monthly returns?

A) Large-capitalization stocks.

B) Long-term corporate bonds.

C) Treasury bills.

Question #2 of 74

In a two-asset portfolio, *reducing* the correlation between the two assets moves the efficient frontier in which direction?

A) The efficient frontier is stable unless the asset's expected volatility changes. This depends on each asset's standard deviation.

B) The frontier extends to the left, or northwest quadrant representing a reduction in risk while maintaining or enhancing portfolio returns.

C) The efficient frontier is stable unless return expectations change. If expectations change, the efficient frontier will extend to the upper right with little or no change in risk.

Question #3 of 74

Stock A has a standard deviation of 10.00. Stock B also has a standard deviation of 10.00. If the correlation coefficient between these stocks is - 1.00, what is the covariance between these two stocks?

A) 1.00.

B) -100.00.

C) 0.00.

Question #4 of 74

Which of the following statements about risk aversion is CORRECT?

A) Risk averse investors will not take on risk.

B) Given a choice between two assets with equal rates of return, the investor will always select the asset with the lowest level of risk.

C) Risk aversion implies that the risk-return line, the CML, and the SML are downward sloping curves.

Question #5 of 74

If the standard deviation of stock A is 13.2 percent, the standard deviation of stock B is 17.6 percent, and the covariance between the two is 0, what is the correlation coefficient?

A) +1.

B) 0.

C) 0.31.

Question #6 of 74

Which of the following portfolios falls below the Markowitz efficient frontier?

Portfolio	Expected Return	Expected Standard Deviation
A	7%	14%
B	9%	26%
C	15%	30%
D	12%	22%

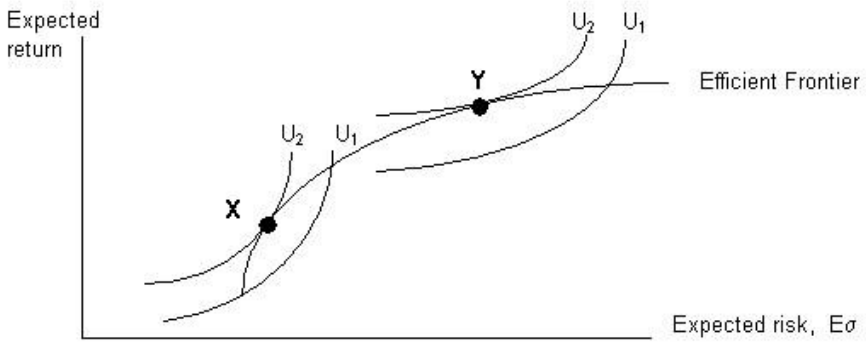
A) B.

B) C.

C) D.

Question #7 of 74

The graph below combines the efficient frontier with the indifference curves for two different investors, X and Y.



Which of the following statements about the above graph is *least* accurate?

A) The efficient frontier line represents the portfolios that provide the highest return at each risk level.

B) Investor X's expected return will always be less than that of Investor Y.

C) Investor X is less risk-averse than Investor Y.

Question #8 of 74

Which of the following statements about the optimal portfolio is NOT correct? The optimal portfolio:

A) lies at the point of tangency between the efficient frontier and the indifference curve with the highest possible utility.

B) is the portfolio that gives the investor the maximum level of return.

C) may be different for different investors.

Question #9 of 74

Stock A has a standard deviation of 0.5 and Stock B has a standard deviation of 0.3. Stock A and Stock B are perfectly positively correlated. According to Markowitz portfolio theory how much should be invested in each stock to minimize the portfolio's standard deviation?

A) 30% in Stock A and 70% in Stock B.

B) 100% in Stock B.

C) 50% in Stock A and 50% in Stock B.

Question #10 of 74

Which of the following inputs is *least likely* required for the Markowitz efficient frontier? The:

A) level of risk aversion in the market.

B) expected return of all securities.

C) covariation between all securities.

Question #11 of 74

Which one of the following portfolios *cannot* lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	20%	35%
B	11%	13%
C	8%	10%
D	8%	9%

A) Portfolio A.

B) Portfolio C.

C) Portfolio D.

Question #12 of 74

Which of the following statements *best* describes an investment that is not on the efficient frontier?

A) The portfolio has a very high return.

B) There is a portfolio that has a lower return for the same risk.

C) There is a portfolio that has a lower risk for the same return.

Question #13 of 74

Three portfolios have the following expected returns and risk:

Portfolio	Expected return	Standard deviation
Jones	4%	2%
Kelly	6%	5%
Lewis	7%	8%

A risk-averse investor choosing from these portfolios could rationally select:

A) any of these portfolios.

B) Jones or Kelly, but not Lewis.

C) Jones, but not Kelly or Lewis.

Question #14 of 74

The optimal portfolio in the Markowitz framework occurs when an investor achieves the diversified portfolio with the:

A) lowest risk.

B) highest utility.

C) highest return.

Question #15 of 74

If the standard deviation of stock A is 7.2%, the standard deviation of stock B is 5.4%, and the covariance between the two is -0.0031, what is the correlation coefficient?

A) -0.19.

B) -0.80.

C) -0.64.

Question #16 of 74

Which of the following statements about portfolio theory is *least* accurate?

A) For a two-stock portfolio, the lowest risk occurs when the correlation coefficient is close to negative one.

B) Assuming that the correlation coefficient is less than one, the risk of the portfolio will always be less than the simple weighted average of individual stock risks.

C) When the return on an asset added to a portfolio has a correlation coefficient of less than one with the other portfolio asset returns but has the same risk, adding the asset will not decrease the overall

---

Question #17 of 74

Risk aversion means that if two assets have identical expected returns, an individual will choose the asset with the:

A) higher standard deviation.

B) shorter payback period.

C) lower risk level.

Question #18 of 74

Using the following correlation matrix, which two stocks would combine to make the lowest-risk portfolio? (Assume the stocks have equal risk and returns.)

Stock	A	B	C
A	+ 1	--	--
B	- 0.2	+ 1	--
C	+ 0.6	- 0.1	+ 1

A) A and C.

B) A and B.

C) C and B.

Question #19 of 74

Assets A (with a variance of 0.25) and B (with a variance of 0.40) are perfectly positively correlated. If an investor creates a portfolio using only these two assets with 40% invested in A, the portfolio standard deviation is *closest* to:

A) 0.3742.

B) 0.3400.

C) 0.5795.

Question #20 of 74

Adding a stock to a portfolio will reduce the risk of the portfolio if the correlation coefficient is *less* than which of the following?

A) +1.00.

B) +0.50.

C) 0.00.

Question #21 of 74

A portfolio manager adds a new stock that has the same standard deviation of returns as the existing portfolio but has a correlation coefficient with the existing portfolio that is less than +1. Adding this stock will have what effect on the standard deviation of the revised portfolio's returns? The standard deviation will:

A) increase.

B) decrease.

C) decrease only if the correlation is negative.

Question #22 of 74

If the standard deviation of returns for stock A is 0.60 and for stock B is 0.40 and the covariance between the returns of the two stocks is 0.009 what is the correlation between stocks A and B?

A) 0.0020.

B) 0.0375.

C) 26.6670.

Question #23 of 74

Kendra Jackson, CFA, is given the following information on two stocks, Rockaway and Bridgeport.

- Covariance between the two stocks = 0.0325
- Standard Deviation of Rockaway's returns = 0.25
- Standard Deviation of Bridgeport's returns = 0.13

Assuming that Jackson must construct a portfolio using only these two stocks, which of the following combinations will result in the *minimum* variance portfolio?

A) 80% in Bridgeport, 20% in Rockaway.

B) 100% in Bridgeport.

C) 50% in Bridgeport, 50% in Rockaway.

Question #24 of 74

A bond analyst is looking at historical returns for two bonds, Bond 1 and Bond 2. Bond 2's returns are much more volatile than Bond 1. The variance of returns for Bond 1 is 0.012 and the variance of returns of Bond 2 is 0.308. The correlation between the returns of the two bonds is 0.79, and the covariance is 0.048. If the variance of Bond 1 increases to 0.026 while the variance of Bond 2 decreases to 0.188 and the covariance remains the same, the correlation between the two bonds will:

A) increase.

B) decrease.

C) remain the same.

Question #25 of 74

On a graph of risk, measured by standard deviation and expected return, the *efficient frontier* represents:

A) the group of portfolios that have extreme values and therefore are “efficient” in their allocation.

B) all portfolios plotted in the northeast quadrant that maximize return.

C) the set of portfolios that dominate all others as to risk and return.

Question #26 of 74

Two assets are perfectly positively correlated. If 30% of an investor's funds were put in the asset with a standard deviation of 0.3 and 70% were invested in an asset with a standard deviation of 0.4, what is the standard deviation of the portfolio?

A) 0.426.

B) 0.370.

C) 0.151.

Question #27 of 74

Stock A has a standard deviation of 4.1% and Stock B has a standard deviation of 5.8%. If the stocks are perfectly positively correlated, which portfolio weights minimize the portfolio's standard deviation?

	Stock A	Stock B
A)	63%	37%
B)	100%	0%
C)	0%	100%

Question #28 of 74

An investor has a two-stock portfolio (Stocks A and B) with the following characteristics:

- $\sigma_A = 55\%$
- $\sigma_B = 85\%$
- $\text{Covariance}_{A,B} = 0.09$
- $W_A = 70\%$
- $W_B = 30\%$

The variance of the portfolio is *closest* to:

A) 0.25.

B) 0.39.

C) 0.54.

Question #29 of 74

A measure of how well the returns of two risky assets move together is the:

A) standard deviation.

B) covariance.

C) range.

Question #30 of 74

In a set of portfolios, the portfolio with the highest rate of return, but the same variance of the rate of return as the others, would be considered a(n):

A) efficient portfolio.

B) positive alpha portfolio.

C) positive beta portfolio.

Question #31 of 74

Which of the following statements about portfolio diversification is *CORRECT*?

A) The efficient frontier represents individual securities.

B) As the correlation coefficient moves from +1 to zero, the potential for diversification diminishes.

C) When a risk-averse investor is confronted with two investment opportunities having the same expected return, the investor will take the opportunity with the lower risk.

Question #32 of 74

An investor has identified the following possible portfolios. Which portfolio *cannot* be on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
V	18%	35%
W	12%	16%
X	10%	10%
Y	14%	20%
Z	13%	24%

A) X.

B) Z.

C) Y.

Question #33 of 74

What is the variance of a two-stock portfolio if 15% is invested in stock A (variance of 0.0071) and 85% in stock B (variance of 0.0008) and the correlation coefficient between the stocks is –0.04?

A) 0.0026.

B) 0.0007.

C) 0.0020.

Question #34 of 74

If two stocks have positive covariance, which of the following statements is CORRECT?

A) If one stock doubles in price, the other will also double in price.

B) The rates of return tend to move in the same direction relative to their individual means.

C) The two stocks must be in the same industry.

Question #35 of 74

The basic premise of the risk-return trade-off suggests that risk-averse individuals purchasing investments with higher non-diversifiable risk should expect to earn:

A) lower rates of return.

B) higher rates of return.

C) rates of return equal to the market.

Question #36 of 74

An investor with a buy-and-hold strategy who makes quarterly deposits into an account should *most appropriately* evaluate portfolio performance using the portfolio's:

A) geometric mean return.

B) money-weighted return.

C) arithmetic mean return.

Question #37 of 74

Betsy Minor is considering the diversification benefits of a two stock portfolio. The expected return of stock A is 14 percent with a standard deviation of 18 percent and the expected return of stock B is 18 percent with a standard deviation of 24 percent. Minor intends to invest 40 percent of her money in stock A, and 60 percent in stock B. The correlation coefficient between the two stocks is 0.6. What is the variance and standard deviation of the two stock portfolio?

A) Variance = 0.04666; Standard Deviation = 21.60%.

B) Variance = 0.02206; Standard Deviation = 14.85%.

C) Variance = 0.03836; Standard Deviation = 19.59%.

Question #38 of 74

Which of the following statements regarding the covariance of rates of return is *least* accurate?

A) If the covariance is negative, the rates of return on two investments will always move in different directions relative to their means.

B) Covariance is positive if two variables tend to both be above their mean values in the same time periods.

C) Covariance is not a very useful measure of the strength of the relationship between rates of return.

Question #39 of 74

Which of the following statements *best* describes risk aversion?

A) Given a choice between two assets of equal return, the investor will choose the asset with the least risk.

B) The investor will always choose the asset with the least risk.

C) There is an indirect relationship between expected returns and expected risk.

Question #40 of 74

An analyst gathered the following data for Stock A and Stock B:

Time Period	Stock A Returns	Stock B Returns
1	10%	15%
2	6%	9%
3	8%	12%

What is the covariance for this portfolio?

A) 3.

B) 12.

C) 6.

Question #41 of 74

There are benefits to diversification as long as:

A) the correlation coefficient between the assets is less than 1.

B) there is perfect positive correlation between the assets.

C) there must be perfect negative correlation between the assets.

Question #42 of 74

Which of the following statements about the efficient frontier is *least* accurate?

A) Portfolios falling on the efficient frontier are fully diversified.

B) Investors will want to invest in the portfolio on the efficient frontier that offers the highest rate of return.

C) The efficient frontier shows the relationship that exists between expected return and total risk in the absence of a risk-free asset.

Question #43 of 74

An asset manager's portfolio had the following annual rates of return:

Year	Return
20X7	+6%
20X8	-37%
20X9	+27%

The manager states that the return for the period is −5.34%. The manager has reported the:

A) geometric mean return.

B) arithmetic mean return.

C) holding period return.

Question #44 of 74

An investor is evaluating the following possible portfolios. Which of the following portfolios would *least likely* lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	26%	28%
B	23%	34%
C	14%	23%
D	18%	14%
E	11%	8%
F	18%	16%

A) B, C, and F.

B) A, B, and C.

C) C, D, and E.

Question #45 of 74

Which one of the following statements about correlation is NOT correct?

A) If the correlation coefficient were -1, a zero variance portfolio could be constructed.

B) Potential benefits from diversification arise when correlation is less than +1.

C) If the correlation coefficient were 0, a zero variance portfolio could be constructed.

Question #46 of 74

An investor begins with a $100,000 portfolio. At the end of the first period, it generates $5,000 of income, which he does not reinvest. At the end of the second period, he contributes $25,000 to the portfolio. At the end of the third period, the portfolio is valued at $123,000. The portfolio's money-weighted return per period is *closest to*:

A) 1.20%.

B) –0.50%.

C) 0.94%.

Question #47 of 74

The correlation coefficient between stocks A and B is 0.75. The standard deviation of stock A's returns is 16% and the standard deviation of stock B's returns is 22%. What is the covariance between stock A and B?

A) 0.3750.

B) 0.0352.

C) 0.0264.

Question #48 of 74

Over the long term, the annual returns and standard deviations of returns for major asset classes have shown:

A) a negative relationship.

B) a positive relationship.

C) no clear relationship.

Question #49 of 74

According to Markowitz, an investor's optimal portfolio is determined where the:

A) investor's highest utility curve is tangent to the efficient frontier.

B) investor's utility curve meets the efficient frontier.

C) investor's lowest utility curve is tangent to the efficient frontier.

Question #50 of 74

A security portfolio earns a gross return of 7.0% and a net return of 6.5%. The difference of 0.5% *most likely* results from:

A) inflation.

B) taxes.

C) fees.

Question #51 of 74

A line that represents the possible portfolios that combine a risky asset and a risk free asset is *most accurately* described as a:

A) capital allocation line.

B) characteristic line.

C) capital market line.

Question #52 of 74

Investors who are *less* risk averse will have what type of indifference curves for risk and expected return?

A) Inverted.

B) Flatter.

C) Steeper.

Question #53 of 74

If the standard deviation of asset A is 12.2%, the standard deviation of asset B is 8.9%, and the correlation coefficient is 0.20, what is the covariance between A and B?

A) 0.0001.

B) 0.0022.

C) 0.0031.

Question #54 of 74

The *most appropriate* measure of the increase in the purchasing power of a portfolio's value over a given span of time is a(n):

A) real return.

B) holding period return.

C) after-tax return.

Question #55 of 74

If the standard deviation of stock A is 10.6%, the standard deviation of stock B is 14.6%, and the covariance between the two is 0.015476, what is the correlation coefficient?

A) 0.0002.

B) 0.

C) +1.

Question #56 of 74

An investment manager is looking at ten possible stocks to include in a client's portfolio. In order to achieve the maximum efficiency of the portfolio, the manager must:

A) include only the stocks that have the lowest volatility at a given expected rate of return.

B) include all ten stocks in the portfolio in equal amounts.

C) find the combination of stocks that produces a portfolio with the maximum expected rate of return at a given level of risk.

Question #57 of 74

Which one of the following portfolios does not lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	7	5
B	9	12
C	11	10
D	15	15

A) C.

B) A.

C) B.

Question #58 of 74

Which of the following measures is NOT considered when calculating the risk (variance) of a two-asset portfolio?

A) Each asset's standard deviation.

B) Each asset weight in the portfolio.

C) The beta of each asset.

Question #59 of 74

If the standard deviation of returns for stock A is 0.40 and for stock B is 0.30 and the covariance between the returns of the two stocks is 0.007 what is the correlation between stocks A and B?

A) 0.05830.

B) 17.14300.

C) 0.00084.

Question #60 of 74

Which of the following statements about the efficient frontier is NOT correct?

A) The efficient frontier line bends backwards due to less than perfect correlation between assets.

B) A portfolio to the left of the efficient frontier is not attainable, while a portfolio to the right of the efficient frontier is inefficient.

C) The slope of the efficient frontier increases steadily as one moves up the curve.

Question #61 of 74

A stock has an expected return of 4% with a standard deviation of returns of 6%. A bond has an expected return of 4% with a standard deviation of 7%. An investor who prefers to invest in the stock rather than the bond is *best* described as:

A) risk seeking.

B) risk neutral.

C) risk averse.

Question #62 of 74

An analyst observes the following return behavior between stocks X and Y.

Time Period	X's Return	Y's Return
1	7	5
2	9	8
3	10	11
4	10	8

What is the covariance of returns between stocks X and Y?

A) +3.0.

B) +1.5.

C) -3.0.

Question #63 of 74

The covariance of the market's returns with the stock's returns is 0.008. The standard deviation of the market's returns is 0.1 and the standard deviation of the stock's returns is 0.2. What is the correlation coefficient between the stock and market returns?

A) 0.40.

B) 0.91.

C) 0.00016.

Question #64 of 74

As the correlation between the returns of two assets becomes lower, the risk reduction potential becomes:

A) greater.

B) smaller.

C) decreased by the same level.

Question #65 of 74

Stock A has a standard deviation of 10%. Stock B has a standard deviation of 15%. The covariance between A and B is 0.0105. The correlation between A and B is:

A) 0.70.

B) 0.55.

C) 0.25.

Question #66 of 74

Which of the following portfolios falls below the Markowitz efficient frontier?

Portfolio	Expected Return	Expected Standard Deviation
A	12.1%	8.5%
B	14.2%	8.7%
C	15.1%	8.7%

A) Portfolio C.

B) Portfolio B.

C) Portfolio A.

Question #67 of 74

Based on historical data for the United States, compared to long-term bonds, equities have tended to exhibit:

A) lower average annual returns and higher standard deviation of returns.

B) higher average annual returns and higher standard deviation of returns.

C) higher average annual returns and lower standard deviation of returns.

Question #68 of 74

A portfolio currently holds Randy Co. and the portfolio manager is thinking of adding either XYZ Co. or Branton Co. to the portfolio. All three stocks offer the same expected return and total risk. The covariance of returns between Randy Co. and XYZ is +0.5 and the covariance between Randy Co. and Branton Co. is -0.5. The portfolio's risk would decrease:

A) most if she put half your money in XYZ Co. and half in Branton Co.

B) more if she bought XYZ Co.

C) more if she bought Branton Co.

Question #69 of 74

An investor calculates the following statistics on her two-stock (A and B) portfolio.

- $\sigma_A = 20\%$
- $\sigma_B = 15\%$
- $r_{A,B} = 0.32$
- $W_A = 70\%$
- $W_B = 30\%$

The portfolio's standard deviation is *closest* to:

A) 0.1832.

B) 0.1600.

C) 0.0256.

Question #70 of 74

The particular portfolio on the efficient frontier that best suits an individual investor is determined by:

A) the individual's asset allocation plan.

B) the current market risk-free rate as compared to the current market return rate.

C) the individual's utility curve.

Question #71 of 74

Which one of the following statements about correlation is NOT correct?

A) If two assets have perfect negative correlation, it is impossible to reduce the portfolio's overall variance.

B) The covariance is equal to the correlation coefficient times the standard deviation of one stock times the standard deviation of the other stock.

C) Positive covariance means that asset returns move together.

Question #72 of 74

The standard deviation of the rates of return is 0.25 for Stock J and 0.30 for Stock K. The covariance between the returns of J and K is 0.025. The correlation of the rates of return between J and K is:

A) 0.20.

B) 0.10.

C) 0.33.

Question #73 of 74

Which of the following statements concerning the efficient frontier is *most* accurate? It is the:

A) set of portfolios that gives investors the lowest risk.

B) set of portfolios that gives investors the highest return.

C) set of portfolios where there are no more diversification benefits.

Question #74 of 74

Gregg Goebel and Mason Erikson are studying for the Level I CFA examination. They have just started the section on Portfolio Management and Erikson is having difficulty with the equations for the covariance ($cov_{1,2}$) and the correlation coefficient ($r_{1,2}$) for two-stock portfolios. Goebel is confident with the material and creates the following quiz for Erikson. Using the information in the table below, he asks Erickson to fill in the question marks.

	Portfolio J	**Portfolio K**	**Portfolio L**
Number of Stocks	2	2	2
Covariance	**?**	$cov_{1,2}$ = 0.020	$cov_{1,2}$ = 0.003
Correlation coefficient	$r_{1,2}$ = 0.750	**?**	**?**
Risk measure Stock 1	Std. $Deviation_1$ = 0.08	Std. $Deviation_1$ = 0.20	Std. $Deviation_1$ = 0.18
Risk measure Stock 2	Std. $Deviation_2$ = 0.18	Std. $Deviation_2$ = 0.12	$Variance_2$ = 0.09

Which of the following choices correctly gives the covariance for Portfolio J and the correlation coefficients for Portfolios K and L?

	Portfolio J	Portfolio K	Portfolio L
A)	0.011	0.002	0.076
B)	1.680	0.002	0.076
C)	0.011	0.833	0.056