Portfolio Management

1) Which of the following inputs are not required in order to achieve portfolio optimization?

A) III and IV only
B) I, II, III and IV only
C) I and III only
D) II, III and IV only

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2) Which of the following statements is (are) true with respect to investing internationally?

I. The low correlation among international markets reduces portfolio risk even during periods of global turmoil.
II. While earnings comparison among international firms is fairly straightforward, the difficulty lies in gauging what the P/E ratio should be.
III. The less extensive the dissemination of financial information, the greater will be the barrier of investing in that particular market.
IV. In addition to the risk that a foreign investment may fall in value, there is the added risk that the investor's home currency value will depreciate as well.

A) III and IV only
B) I, II, III and IV only
C) I and III only
D) II, III and IV only

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3) Which of the following statements is (are) true with respect to the factors that a fund manager must take into account when managing an endowment fund?

I. Endowment funds are not generally subject to any taxes.
II. Due to its long-term nature, volatility in asset values is less tolerable than volatility in current income.
III. Due to the income requirements, non-fixed income assets are rarely emphasized in an endowment fund.
IV. Should the endowment fund become impaired, the promised benefits will become protected by the Uniform Management of Institutional Funds Act (UMIFA).
A) I, II, III and IV
B) II only
C) II and III only
D) I only

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4) An economist observes that a one-year Treasury bill has a yield of 7.2%. The market risk premium is 8.4%. If the rate of inflation is 3.7%, what is the exact real risk-free rate of return?

A) 4.53%
B) 3.50%
C) 7.20%
D) 3.38%

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5) A U.S.-based pension fund has hired a Japanese investment management firm to manage the pension assets that are earmarked for European investments. Which of the following events would hurt the U.S. pension fund the most.

A) An extreme depreciation of the yen relative to the dollar
B) An extreme appreciation of the yen relative to the euro
C) An extreme depreciation of the yen relative to the euro
D) An extreme depreciation of the euro relative to the dollar

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6)	Which of the following statements is (are) true with respect to defined contribution plans? I. If the plan sponsor becomes financially impaired, beneficiaries may be protected by the Pension Benefit Guaranty Corporation. II. Poor investment performance in the plan will affect the amount of income that the beneficiaries will receive. III. The beneficiaries are entitled to receive a predetermined amount of income once they retire. IV. Profit-sharing plans are a form of defined contribution plans. A) II and IV only B) I and III only C) I and II only D) II only
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7)	Which of the following events will not likely cause the slope of the SML to flatten? A) If the spectrum of investments is mostly made up of low beta securities B) An increase in short-term interest rates, holding all else constant C) A reduction in the market risk premium D) The amount of uncertainty in the markets and economy reaches a cyclical low
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8)	Which of the following statements is (are) true with respect to defined benefit plans? I. The beneficiaries are entitled to receive a predetermined amount of income once they retire. II. Poor investment performance in the plan will affect the amount of income that the beneficiaries will receive. III. If the plan's funded status is high, than the fund manager must take on less risk. IV. If the plan sponsor becomes financially impaired, beneficiaries may be protected by the Pension Benefit Guaranty Corporation. A) I, III and IV only B) I and IV only C) III and IV only D) I, II and III only
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9)	A U.S. investor is observing a bond that is trading in Japan. This bond is currently priced at 100 and is paying a coupon of 6%. At the end of year one, the bond is expected to be sold at 102 and the Yen is expected to have appreciated by 5%. What will be the total holding period return, in U.S. dollars, for this investor if he decided to purchase the bond? A) 3.7% B) 9.2% C) 8.0% D) 13.4%
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10)	Which of the following statements is (are) true with respect to the efficient frontier and indifference curves? I. Individual securities will always be within the efficient frontier, never actually on the curve. II. All portfolios lying on the efficient frontier have no unsystematic risk whatsoever. III. The lower the correlation among the securities, the less concave will be the efficient frontier. IV. The lower an investor's risk tolerance, the less steep will be their indifference curve. A) III and IV only B) IV only C) I and II only D) III only
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11)	Stock A has a beta of 2.0 and an expected return of 21%, while Stock B has a beta of 0.5 and an expected return of 13%. If the risk-free rate were 5%, which statement would best describe the given situation? A) An investor may profit buy selling Stock A and using the proceeds to invest in Stock B. B) There are no profit opportunities since both stocks are fairly priced. C) An investor may profit buy selling Stock B and using the proceeds to invest in Stock A. D) The principles of diversification dictate that both securities be held in a portfolio.
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12)	The investment objectives of an investor should be expressed in terms of: A) investment horizon and liquidity concerns. B) stock market expectations. C) risk and expected return. D) legal as well as tax issues.
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13)	Which of the following statements is least accurate with respect to the assumptions underlying the capital market theory? A) All investors have the same level of risk aversion. B) All investors have the same one period investment horizon. C) All assets are fairly priced in accordance with their inherent risk. D) Any change in inflation is fully anticipated.
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14)	The prudent man rule would mandate an investment manager to: A) examine the risk of each security in the context of an overall portfolio. B) examine the risk of each security in the context of modern portfolio theory. C) examine the risk or each security in terms of its beta. D) examine the risk of each security on a stand-alone basis.
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15)	Which of the following features is not characteristic of an individual in the consolidation phase? A) Asset management becomes a high priority. B) Income levels are the highest, relative to the other phases. C) Debt management becomes a low priority. D) Fixed-income investments would be the best choice at this phase.
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16)	Which of the following statements is (are) true with respect to diversification? I. Diversification is only possible if the correlation coefficient between the securities in negative. II. To reduce the systematic risk of a portfolio, more securities should be added to a portfolio. III. In a very well-diversified portfolio, beta will be very low. IV. The elimination of unsystematic risk should have no impact on portfolio return. A) II, III and IV only B) I and III only C) IV only D) II and III only
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17)	Which of the following statements is false with respect to the CML and the SML? A) The slope of both the CML and SML is dependent upon expected market return. B) The slope of the CML may be defined by the Sharpe ratio. C) If a stock cannot be plotted on the CML, then by definition, it cannot be plotted on the SML. D) The SML plots both efficient portfolios and efficient stocks.
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18)	Which of the following statements is (are) true with respect to risk aversion and its implications for the investment process? I. The longer an investor's time horizon, the greater the proportion of more risky assets will be included in the portfolio. II. The greater the correlation among asset classes, the greater will be the variety of assets found in an optimal portfolio. III. Risk-averse investors view true return as that return which is in excess of the return that is required to compensate them for the inherent risk that's built into the investment. IV. The utility curve for risk neutral investors is downward sloping. A) I and II only B) II only C) I and III only D) I, II, III and IV only
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19)	In a "fully" diversified portfolio, all of the following would be true except: A) portfolio standard deviation would be lower than the weighted average of the standard deviations of the individual securities. B) there would be no unsystematic risk. C) the expected return of the portfolio will equate that of the expected market return. D) expected portfolio return would simply be the weighted average of the expected returns of all the individual securities.
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20)	Which of the following statements is least accurate with respect to the capital asset pricing model (CAPM)? The capital market line (CML) visually depicts CAPM. CAPM indicates what should be the required return on a risky asset. CAPM indicates what should be the expected return on a risky asset. CAPM denotes the relationship between return and the asset's systematic risk.

Portfolio Management

1)	**A**	**B**	**C**	**D**	**11)**	**A**	**B**	**C**	**D**
2)	**A**	**B**	**C**	**D**	**12)**	**A**	**B**	**C**	**D**
3)	**A**	**B**	**C**	**D**	**13)**	**A**	**B**	**C**	**D**
4)	**A**	**B**	**C**	**D**	**14)**	**A**	**B**	**C**	**D**
5)	**A**	**B**	**C**	**D**	**15)**	**A**	**B**	**C**	**D**
6)	**A**	**B**	**C**	**D**	**16)**	**A**	**B**	**C**	**D**
7)	**A**	**B**	**C**	**D**	**17)**	**A**	**B**	**C**	**D**
8)	**A**	**B**	**C**	**D**	**18)**	**A**	**B**	**C**	**D**
9)	**A**	**B**	**C**	**D**	**19)**	**A**	**B**	**C**	**D**
10)	**A**	**B**	**C**	**D**	**20)**	**A**	**B**	**C**	**D**

Answers

1)	C	11)	A
2)	C	12)	C
3)	D	13)	A
4)	D	14)	D
5)	D	15)	D
6)	A	16)	C
7)	A	17)	C
8)	B	18)	C
9)	D	19)	C
10)	C	20)	A

Explanations

1)	The Right Answer is **C**. **Explanation:** The risk-free rate of return is considered once an optimum portfolio has been constructed. In particular, an investor will decide what proportion of his/her assets will be allocated to the optimum portfolio and thus the resulting balance of his/her assets will be automatically allocated to risk-free assets.
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2)	The Right Answer is **C**. **Explanation:** Choice I is incorrect because empirically, international markets become extremely highly correlated during periods of global turmoil. The low correlation among international securities usually exists only under normalized conditions. II is incorrect because the fact is that earnings comparison among international firms is very difficult; each market employs its own accounting conventions. IV is incorrect because the added risk to an international investor is that the "foreign" currency might depreciate.
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3)	The Right Answer is **D**. **Explanation:** Choice II is incorrect because the primary purpose of an endowment fund is to help finance an organization's current expenditure needs. Therefore, the stability of current income is very important, far more important than the stability in asset values. III is incorrect because an endowment fund must also preserve the real value of a portfolio in order to finance future income needs. To achieve a real level of growth, often assets such as stocks, real estate and venture capital are emphasized. IV is incorrect because UMIFA only sets the legal constraints for endowment plan management; it does not act as a guarantor
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4)	The Right Answer is **D**. **Explanation:** The Fisher Equation measures the exact relationship between nominal and real rates. $(1+i_{NOMINAL}) = (1+i_{REAL})(1+INFL)$ $\therefore i_{REAL} = \frac{(1+i_{NOMINAL})}{(1+INFL)} - 1$ $= \frac{1.072}{1.037} - 1$ $= 3.38\%$
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5)	The Right Answer is **D**. **Explanation:** Even though the manager is Japanese, the real currency risk that exists is that which is between the euro, which is the currency in which the investments are denominated in, and the dollar, which is the currency in which the beneficiaries will require their pension income in.
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6)	The Right Answer is **A**. **Explanation:** Choice I is incorrect because **unlike defined benefit plans, the assets and income from defined contribution plans are not guaranteed by a third party**. III is incorrect because defined contribution plan participants are only entitled to receive the income that their accumulated assets can generate.
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7)	The Right Answer is **A**. **Explanation:** If the spectrum of investments is mostly made up of low beta securities, all that will mean is that the securities will mostly plot on the segment of the SML that is between the risk-free rate and the market rate. That says nothing about a change in the slope for the SML. On the other hand, as the amount of uncertainty drops, Treasury prices will fall, as investors have a lesser need for security, and simultaneously, the market risk premium will fall. Both these events will likely flatten the SML curve.
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8)	The Right Answer is **B**. **Explanation:** Choice II is incorrect because beneficiaries must be paid what they were promised. Therefore, it is the plan sponsor (or the employer) who will have to make more contributions to the plan if the plan performs poorly. III is incorrect because if the plan's funded status is high (meaning that the plan assets are more than enough to meet plan obligations), then the fund manager can actually take on more risk.
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9)	The Right Answer is **D**. **Explanation:** In this case, total dollar return will come from two sources, the return from the security itself and the return resulting from the currency conversion. Algebraically: = [1 + (102-100+6)/100] x (1 + 0.05) - 1 = 0.134 = 13.4%
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10)	The Right Answer is **C**. **Explanation:** Choice I is true because a security alone will have a lot of risk that hasn't been diversified away. Thus it is possible to construct a portfolio that has a similar return but much lower risk. II is true because only the most diversified portfolios will end up on the efficient frontier; however, that being the case, all unsystematic risk would have been diversified away. III is false because **the lower the correlation among the securities, the more concave will be the efficient frontier**. For instance, if securities have lower correlation amongst themselves, then it is possible to diversify portfolio risk even more, resulting in a leftward shift in the curve, giving it a more concave shape. IV is false because the **lower an investor's risk tolerance, the steeper will be their indifference curve**. A steep indifference curve implies that an investor requires a much higher rate of return for every additional unit of risk that they inherit.
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11)	The Right Answer is **A**. **Explanation:** Had we been given the information with respect to the expected rate of return on the market, we would have been able to construct the SML, which would have enabled us to determine which security was efficient and which was not. However, with the information that's given, we can still determine which of the two securities has a better reward-to-risk ratio. In particular, we want to measure how much risk premium would we get for each unit of risk. In other words: [Security Return - Risk-Free Rate]/Beta. For Stock A: [21%-5%]/2.0 = 8% For Stock B: [13%-5%]/0.50 = 16%. Therefore, for each unit of beta, Stock B yields 16%, while Stock A yields only 8%. The profit opportunity here would be to sell Stock A and use the proceeds to acquire Stock B.
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12)	The Right Answer is **C**. **Explanation:** In an efficient market, a stock's expected return has built in all the risk factors. Therefore, an investor's task is simply to determine how much risk he or she is willing to take, and the markets will determine what the equilibrium rate of return should be at that given level of risk.
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13)	The Right Answer is **A**. **Explanation:** It is never assumed that all investors have the same degree of risk aversion.
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14)	The Right Answer is **D**. **Explanation:** The prudent man rule is much more outdated than the rules imposed by ERISA or the prudent expert rule. Hence, it does not incorporate the findings of modern portfolio theory, like overall portfolio risk or individual stock betas. Instead it just examines the risk of each security on a stand-alone basis.
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15)	The Right Answer is **D**. **Explanation:** During this phase, the individual is already presumed to be in the highest income bracket he or she will ever achieve. Therefore, there is very little need for income from the investments.
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16)	The Right Answer is **C**. **Explanation:** Choice I is incorrect because diversification is possible as long as the correlation coefficient is less than +1. II and III are incorrect because portfolio systematic risk (beta) is the weighted average of the individual security betas. Therefore, what matters is the beta of the securities that are added, not how many securities are added. IV is true because the market only compensates for risk that is undiversifiable. Therefore, the presence or absence of unsystematic risk should have no bearing on portfolio expected return.
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17)	The Right Answer is **C**. **Explanation:** CML plots expected return against total risk, whereas the SML plots expected return against systematic risk. Therefore, if a stock cannot be plotted on the CML, it simply means that it has too much total risk for the return that it is generating. However, SML is only concerned with systematic risk; therefore it ignores all other excess risk. Thus, if the stock's expected return is proportional to its systematic risk, it may still be plotted on the SML.
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18)	The Right Answer is **C**. **Explanation:** Choice II is incorrect because the greater the correlation among asset classes, the lower will be the variety of assets found in an optimal portfolio. With a low correlation, there will be very little benefits from including many assets in the portfolio. IV is incorrect since the utility curve for risk-neutral investors is a straight horizontal line, meaning that its slope is zero. Specifically, the utility curve is simply equal to the return that these investors expect, regardless of risk.
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19)	The Right Answer is **C** **Explanation:** A well-diversified portfolio simply implies that all unsystematic risk has been eliminated. It does not mean that portfolio return will equal market return. For example, a very well-diversified portfolio could end up having a beta of .5, which means that it is only half as volatile as the market.
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20)	The Right Answer is **A** **Explanation:** The CML depicts the capital market theory. It's the security market line (SML) that depicts CAPM. Furthermore, in an efficient market, the expected return and the required return should be the same. Otherwise, arbitrage opportunities would arise.