

Chapter 6 - Practice Questions

1. If a T-bill pays 5 percent, which of the following investments would **not** be chosen by a risk-averse investor?
 - A) An asset that pays 10 percent with a probability of 0.60 or 2 percent with a probability of 0.40.
 - B) An asset that pays 10 percent with a probability of 0.40 or 2 percent with a probability of 0.60.
 - C) An asset that pays 10 percent with a probability of 0.20 or 3.75 percent with a probability of 0.80.
 - D) An asset that pays 10 percent with a probability of 0.30 or 3.75 percent with a probability of 0.70.
 - E) neither A nor B would be chosen.

2. Which of the following statements is (are) **true**?
 - I) Risk-averse investors reject investments that are fair games.
 - II) Risk-neutral investors judge risky investments only by the expected returns.
 - III) Risk-averse investors judge investments only by their riskiness.
 - IV) Risk-loving investors will not engage in fair games.
 - A) I only
 - B) II only
 - C) I and II only
 - D) II and III only
 - E) II, III, and IV only

3. In the mean-standard deviation graph, which one of the following statements is **true** regarding the indifference curve of a risk-averse investor?
 - A) It is the locus of portfolios that have the same expected rates of return and different standard deviations.
 - B) It is the locus of portfolios that have the same standard deviations and different rates of return.
 - C) It is the locus of portfolios that offer the same utility according to returns and standard deviations.
 - D) It connects portfolios that offer increasing utilities according to returns and standard deviations.
 - E) none of the above.

4. Elias is a risk-averse investor. David is a less risk-averse investor than Elias. Therefore,
 - A) for the same risk, David requires a higher rate of return than Elias.
 - B) for the same return, Elias tolerates higher risk than David.
 - C) for the same risk, Elias requires a lower rate of return than David.
 - D) for the same return, David tolerates higher risk than Elias.
 - E) cannot be determined.

5. A portfolio has an expected rate of return of 15% and a standard deviation of 15%. The risk-free rate is 6 percent. An investor has the following utility function: $U = E(r) - 0.005A\sigma^2$. Which value of A makes this investor indifferent between the risky portfolio and the risk-free asset?
- A) 5
 B) 6
 C) 7
 D) 8
 E) none of the above
6. Consider a risky portfolio, P, with an expected rate of return of 0.15 and a standard deviation of 0.15, that lies on a given indifference curve. Which one of the following portfolios might lie on the same indifference curve?
- A) $E(r) = 0.15$; Standard deviation = 0.20
 B) $E(r) = 0.15$; Standard deviation = 0.10
 C) $E(r) = 0.10$; Standard deviation = 0.10
 D) $E(r) = 0.20$; Standard deviation = 0.15
 E) $E(r) = 0.10$; Standard deviation = 0.20
7. An investor can choose to invest in T-bills paying 5% or a risky portfolio with end-of-year expected cash flow of \$132,000. If the investor requires a risk premium of 5%, what would she be willing to pay for the risky portfolio?
- A) \$100,000
 B) \$108,000
 C) \$120,000
 D) \$145,000
 E) \$147,000
8. Steve is more risk-averse than Edie. On a graph that shows Steve and Edie's indifference curves, which of the following is true? Assume that the graph shows expected return on the vertical axis and standard deviation on the horizontal axis.
- I) Steve and Edie's indifference curves might intersect.
 II) Steve's indifference curves will have flatter slopes than Edie's.
 III) Steve's indifference curves will have steeper slopes than Edie's.
 IV) Steve and Edie's indifference curves will not intersect.
 V) Steve's indifference curves will be downward sloping and Edie's will be upward sloping.
- A) I and V
 B) I and III
 C) III and IV
 D) I and II
 E) II and IV

Use the following to answer questions 9-10:

Consider the following two investment alternatives. First, a risky portfolio that pays a 20 percent rate of return with a probability of 65% or a 7 percent return with a probability of 35%, and second, a T-bill that pays 3 percent.

9. The risk premium on the risky investment is
 - A) 12.45 percent.
 - B) 13.1 percent.
 - C) 9.75 percent.
 - D) 15.6 percent.
 - E) none of the above.

10. If you invest \$100,000 in the risky portfolio, your expected profit would be _____.
 - A) \$15,450
 - B) \$17,500
 - C) \$14,700
 - D) \$13,000
 - E) none of the above

11. An investor can choose to invest in T-bills paying 2% or a risky portfolio with end-of-year cash flow of \$4,000. If the investor requires a risk premium of 6%, what would she be willing to pay for the risky portfolio?
 - A) \$3,669.13
 - B) \$3,703.70
 - C) \$3,567.89
 - D) \$4,212.88
 - E) \$2,753.46

12. The standard deviation of a portfolio that has 40% of its value invested in a risk-free asset and 60% of its value invested in a risky asset with a standard deviation of 40% is _____.
 - A) 18
 - B) 14
 - C) 19
 - D) 24
 - E) 20

13. If the standard deviation of stock 'A' is 30, the standard deviation of stock 'B' is 30, and the correlation between stocks 'A' and 'B' is 0.8, the covariance between stocks 'A' and 'B' is ____.
- A) 900
 - B) 24
 - C) 720
 - D) 30
 - E) 642
14. Assume that a portfolio is invested in three securities. Security 'A' has an expected return of 8%, security 'B' has an expected return of 10%, and security 'C' has an expected return of 14%. If the portfolio weights are 20%, 40%, and 40% respectively, the expected return on the portfolio should be ____%.
- A) 11.2
 - B) 12.4
 - C) 10.7
 - D) 9.8
 - E) none of the above

Answer Key

1. C
2. C
3. C
4. D
5. D
6. C
7. C
8. B
9. A
10. A
11. B
12. D
13. C
14. A