

# Practice Test 2

Created: 3:33:24 PM CST

1. You are given a job to make a decision on project X, which is composed of three independent projects A, B, and C which have NPVs of +\$60, -\$30 and +\$120, respectively. How would you go about making the decision about whether to accept or reject the project?
  - A. Accept the firm's joint project as it has a positive NPV
  - B. Reject the joint project
  - C. Break up the project into its components: accept A and C and reject B
  - D. None of the above
2. Given the following cash flows for project Z:  $C_0 = -2,000$ ,  $C_1 = 1,200$ ,  $C_2 = 1,440$  and  $C_3 = 6,000$ , calculate the discounted payback period for the project at a discount rate of 20%.
  - A. 3 year
  - B. 2 years
  - C. 1 year
  - D. None of the above
3. Given the following cash flows for Project M:  $C_0 = -2,000$ ,  $C_1 = +500$ ,  $C_2 = +1,500$ ,  $C_3 = +1,455$ , calculate the IRR for the project.
  - A. 28%
  - B. 18%
  - C. 10%
  - D. None of the above
4. Project X has the following cash flows:  $C_0 = +4,000$ ,  $C_1 = 2,400$  and  $C_2 = -3,000$ . If the IRR of the project is 21.65% and if the cost of capital is 15%, you would:
  - A. Accept the project
  - B. Reject the project
5. The following table gives the available projects for a firm.

A	B	C	D	E	F	G	
90	20	60	50	150	40	20	Initial investment
140	70	65	-10	30	32	10	NPV

If the firm has a limit of 210 million to invest, what is the maximum NPV the company can obtain?

- A. 200
  - B. 283
  - C. 307
  - D. None of the above
6. Mega Corporation has the following returns for the past three years: 8%, 16% and 24%. Calculate the variance of the return and the standard deviation of the returns.
    - A. 128 and 11.3%
    - B. 64 and 8%
    - C. 43 and 6.5%
    - D. None of the above
  7. Stock X has a standard deviation of return of 10%. Stock Y has a standard deviation of return of 20%. The correlation coefficient between stocks is 0.5. If you invest 60% of the funds in stock X and 40% in stock Y, what is the standard deviation of a portfolio?

- A. 10%
- B. 20%
- C. 12.2%
- D. None of the above

8. The three year annual return for stock B comes out to be 0%, 10% and 26%. Three year annual returns for the market portfolios are +6%, 18%, 24%. Calculate the beta for the stock.

- A. 0.7
- B. 1.36
- C. 1.0
- D. None of the above

9. Briefly explain the term "market portfolio."

10. Explain the term market risk.

11. Briefly explain the "capital asset pricing model."

## Practice Test 2 KEY

Created: 3:33:24 PM CST

1. (p. 88) C
2. (p. 90) B
3. (p. 91) A
4. (p. 93) B
5. (p. 100) C
6. (p. 157) B
7. (p. 164) C
8. (p. 170) B
9. (p. 187) Market portfolio is a risky portfolio that has the average risk for the economy. The beta of this portfolio is one. Market-index portfolios represent it in practice.
10. (p. 187) Market risk is that part of the risk that is associated with market-wide variations. Investors cannot eliminate market risk. All the risk in a well-diversified portfolio is market risk. Beta is a measure of market risk.
11. (p. 189) The relationship, that in a competitive market, the expected risk premium on a security varies in direct proportion to beta is called the capital asset pricing model (CAPM). It is expressed as:  
$$(r - r_f) = \beta (r_m - r_f).$$
Where:  
( $r - r_f$ ) = expected risk premium on any security  
( $r_m - r_f$ ) = market risk premium  
 $\beta$  = security risk  
It is used for comparing investments with different risk characteristics.