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: C0= -2,000, C1= 1,200, C2= 1,440 and C3= 6000, 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: C0= -2,000, C1= +500, C2= +1,500, C3= +1455, 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: C0= +4000, C1= 2,400 and C2= -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.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>Initial investment</th>
<th>NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>20</td>
<td>60</td>
<td>50</td>
<td>150</td>
<td>40</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>70</td>
<td>65</td>
<td>-10</td>
<td>30</td>
<td>32</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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?
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."
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.