1. Chapman Enterprises is considering a seven-year project that has a positive, but very low NPV. Chapman's planners have recently concluded that it will be able to abandon the project after two years, if operating cash flows turn out to be lower than expected. What effect is this opportunity likely to have on the project's expected return and risk?
   a. Expected return and risk would likely decrease.
   b. Expected return would likely increase, while risk would likely decrease.
   c. Expected return and risk would likely increase.
   d. Expected return would likely decrease, while risk would likely increase.
   e. Expected return and risk would be largely unaffected.

2. The project Chapman Enterprises is considering is expected to generate the following cash flows resulting in one of the following three NPV's: $29,435 (the best-case scenario), $1,983 (the base-case scenario), or -$21,013 (the worst-case scenario). There is a 50% chance of the base-case scenario occurring, and 25% chances of either the best-case or worst-case scenarios. Based on this information, Chapman conducted a scenario analysis and determined that the expected NPV of this project is $3,097. However, if the firm abandons the project after the second year, the worst case scenario will have an expected NPV of -$11,873. Taking into account the abandonment option, what is the project's new expected NPV?
   a. $2,285
   b. $3,097
   c. $5,382
   d. $6,115
   e. $6,539

3. Which of the following would increase the value of a real option?
   a. An increase in the volatility of the underlying project.
   b. An increase in the time remaining until the real option must be exercised.
   c. An increase in the cost of exercising the real option.
   d. Both A and B are correct.
   e. All of the above are correct.

4. Which of the following statements is most correct?
   a. A growth option is present when an investment offers the opportunity to make another profitable investment that would not otherwise be possible.
   b. Capital rationing occurs when management places a constraint on the size of a firm's capital budget during a particular period.
   c. If a firm were to make additional investment in a plant to offer it the possibility of making additional products, this would represent a flexibility option.
   d. Both A and B are correct.
   e. All of the above are correct.
5. Stock A has a beta of 1.2 and Stock B has a beta of 0.8. Which of the following statements must be true about these securities?

a. When held in isolation, Stock A has greater risk than Stock B.
b. Stock B would be a more desirable addition to a portfolio than Stock A.
c. The standard deviation of Stock A will be greater than that on Stock B.
d. The required return on Stock A will be greater than that on Stock B.
e. The required return on Stock B will be greater than that on Stock A.

6. You have been scouring The Wall Street Journal looking for stocks that are “good values” and you have calculated the expected returns for five stocks (see below). Comparing them to the required rates of return, which stock would be the best investment [assume the risk-free rate (kRF) is 7 percent and the market risk premium (kM – kRF) is 2 percent]?

<table>
<thead>
<tr>
<th>Stock</th>
<th>Expected return</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>9.01%</td>
<td>1.7</td>
</tr>
<tr>
<td>B</td>
<td>11.06%</td>
<td>1.0</td>
</tr>
<tr>
<td>C</td>
<td>5.04%</td>
<td>-0.1</td>
</tr>
<tr>
<td>D</td>
<td>7.74%</td>
<td>0.9</td>
</tr>
<tr>
<td>E</td>
<td>10.5%</td>
<td>2.5</td>
</tr>
</tbody>
</table>

a. Stock A  
b. Stock B  
c. Stock C  
d. Stock D  
e. Stock E

7. You know the following data of Stocks A and B:

<table>
<thead>
<tr>
<th>Stock</th>
<th>Expected return</th>
<th>Standard deviation</th>
<th>Beta</th>
<th>Correlation between Stock A and Stock B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock A</td>
<td>10%</td>
<td>8%</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Stock B</td>
<td>18%</td>
<td>20%</td>
<td>1.2</td>
<td></td>
</tr>
</tbody>
</table>

You have put together a portfolio that is 50 percent Stock A and 50 percent Stock B. Which of the following statements is most correct?

a. The portfolio’s expected return is more than 18 percent. 
b. The portfolio’s beta is less than 0.8. 
c. The portfolio’s standard deviation is less than 20 percent. 
d. The portfolio’s standard deviation is less than 0 percent. 
e. Answers b and c are correct

8. You hold a diversified portfolio consisting of a $10,000 investment in each of 20 different common stocks (i.e., your total investment is $200,000). The portfolio beta is equal to 1.2. You have decided
to sell one of your stocks that has a beta equal to 0.7 for $10,000. You plan to use the proceeds to purchase another stock that has a beta equal to 1.4. What will be the \textbf{beta} of the \textbf{new portfolio}?  

\begin{itemize}
  \item[a.] 1.165 
  \item[b.] 1.235 
  \item[c.] 1.250 
  \item[d.] 1.284 
  \item[e.] 1.333 
\end{itemize}

9. Stock A has a beta of 1.5 and Stock B has a beta of 0.5. Which of the following statements \textit{must be true} about these securities? (Assume the market is in equilibrium.)

\begin{itemize}
  \item[a.] When held in isolation, Stock A has greater risk than Stock B. 
  \item[b.] Stock B would be a more desirable addition to a portfolio than Stock A. 
  \item[c.] Stock A would be a more desirable addition to a portfolio than Stock B. 
  \item[d.] The expected return on Stock A will be greater than that on Stock B. 
  \item[e.] The expected return on Stock B will be greater than that on Stock A. 
\end{itemize}

10. Stock A and Stock B each have an expected return of 15 percent, a standard deviation of 20 percent, and a beta of 1.2. The returns of the two stocks are not perfectly correlated; the correlation coefficient is 0.6. You have put together a portfolio, which is 50 percent Stock A and 50 percent Stock B. Which of the following statements is most correct?

\begin{itemize}
  \item[a.] The portfolio's expected return is 15 percent. 
  \item[b.] The portfolio's beta is less than 1.2. 
  \item[c.] The portfolio's standard deviation is 20 percent. 
  \item[d.] Statements a and b are correct. 
  \item[e.] All of the statements above are correct. 
\end{itemize}

11. Which of the following statements is most correct?

\begin{itemize}
  \item[a.] As a firm uses less debt and more equity in its capital structure, the MCC schedule declines. 
  \item[b.] Depreciation-generated funds have a cost less than the firm's lowest WACC, and hence they have no impact on the MCC schedule. 
  \item[c.] As a firm's debt ratio approaches 100 percent, the after-tax cost of debt, \( rd(1 - T) \), will approach zero. 
  \item[d.] As a firm uses more debt the cost of debt decreases which lowers the WACC. 
  \item[e.] A decrease in the corporate tax rate would increase the weighted average cost of capital for a typical firm other things held constant. 
\end{itemize}

12. Which of the following activities is not a major use of the cost of capital?

\begin{itemize}
  \item[a.] Evaluating capital budgeting projects 
  \item[b.] Calculating rates of return on investments 
  \item[c.] Calculating a firm's economic value added 
  \item[d.] Deciding whether to lease or purchase assets 
  \item[e.] Regulating the monopoly services provided by utilities companies 
\end{itemize}
13. Which of the following statements is most correct?

   a. The WACC is an after-tax cost of capital.
   b. The WACC depends upon the component costs of existing capital.
   c. There is no cost associated with retained earnings.
   d. Both A and B are correct.
   e. Both A and C are correct.

14. The Jackson Company wants to purchase an asset costing $6 million. The firm just reported a net income (NI0) of $10 million; its payout ratio is 10 percent; and the firm has 1 million shares of stock outstanding. Jackson's market value capital structure, shown below, is considered to be optimal (assume that there is no short-term debt):

   | Long-term Debt | $18,900,000 |
   | Equity         | 12,600,000  |
   | Total Capital  | $31,500,000 |

   Jackson expects its earnings (and therefore its dividends) to continue to grow at their historical rate of 4 percent per year for the indefinite future. The current risk free rate is 5 percent and the expected return on the market portfolio is 16 percent. Jackson's cost of debt (kd) is 8 percent and the firm's tax rate is 40 percent. Calculate Jackson's weighted average cost of capital.

   a. 7.78 percent.
   b. 9.23 percent.
   c. 12.15 percent.
   d. 14.72 percent.
   e. 18.99 percent.

USE THE INFORMATION BELOW TO ANSWER THE FOLLOWING 3 QUESTIONS

In order to accurately assess the capital structure of a firm, it is necessary to convert its balance sheet figures to a market value basis. KJM Corporation's balance sheet as of today, January 1, 1999, is as follows:

   Long-term debt (bonds, at par) $10,000,000
   Preferred stock ($100 par) 2,000,000
   Common stock ($10 par) 10,000,000
   Retained earnings 4,000,000
   Total debt and equity $26,000,000

The bonds have a 4 percent annual coupon rate, payable semiannually, and a par value of $1,000. They mature on January 1, 2009. The yield to maturity is 12 percent, so the bonds now sell below par. KJM's perpetual preferred stock has a $100 par value, pays a quarterly dividend of $2.50, and has a yield to investors of 8 percent. KJM's common stock has a $10 par value and the actual price per common share is $25.

15. What is the current market value of the firm's debt?

   a. $5,412,000
b. $5,480,000  
c. $2,531,000  
d. $7,706,000  
e. $7,056,000

16. What is the current market value of the firm's preferred stock?
   a. $1,200,000  
b. $1,600,000  
c. $2,000,000  
d. $2,500,000  
e. $3,000,000

17. What is the current market value of the firm's common equity?
   a. $10,000,000  
b. $14,000,000  
c. $25,000,000  
d. $29,000,000  
e. $37,000,000

**USE THE FOLLOWING INFORMATION TO ANSWER THE NEXT THREE QUESTIONS**

Topsider Inc. is considering the purchase of a new leather-cutting machine to replace an existing machine that has a book value of $3,000 and can be sold for $1,500. The old machine is being depreciated on a straight-line basis, and its estimated salvage value 3 years from now is zero. The new machine will reduce costs (before taxes) by $7,000 per year. The new machine has a 3-year life, it costs $14,200, and it can be sold for an expected $2,000 at the end of the third year. Our tax accountant has told Topsider that the new machine would be depreciated using the following depreciation schedule: Year 1 @ 33%, Year 2 @ 45%, Year 3 @ 15%, and Year 4 @ 7% Assuming a 40 percent tax rate and a cost of capital of 16 percent, answer the following three questions:

18. For this project, Topsider's cash flows in Year 0 for this project are closest to:
   a. -$14,000  
b. -$13,000  
c. -$12,000  
d. -$11,000  
e. -$10,000

19. For this project, Topsider's cash flows in Year 2 for this project are closest to:
   a. $2,000  
b. $3,000  
c. $4,000  
d. $5,000  
e. $6,000

20. For this project, Topsider's cash flows in Year 3 for this project are closest to:
21. The Target Copy Company is contemplating the replacement of its old printing machine with a new model costing $60,000. The old machine, which originally cost $40,000, has 6 years of expected life remaining and a current book value of $30,000 versus a current market value of $24,000. Target's corporate tax rate is 40 percent. If Target purchases the new machine and sells the old one at market value, what is the net cash flow in year 0?

a. -$22,180
b. -$30,000
c. -$33,600
d. -$36,000
e. -$40,000

22. When evaluating a new project, the firm should consider all of the following factors except:

a. Changes in working capital attributable to the project.
b. Previous expenditures associated with a market test to determine the feasibility of the project, if the expenditures have been expensed for tax purposes.
c. The current market value of any equipment to be replaced.
d. The resulting difference in depreciation expense if the project involves replacement.
e. All of the statements above should be considered.

23. The most commonly held view of capital structure, according to the text, is that the weighted average cost of capital

a. Declines steadily as more debt is used.
b. First declines with moderate amounts of leverage and then increases.
c. Increases proportionately with increases in leverage.
d. Is unaffected by the level of debt used.
e. Is minimized at a balanced capital structure of 50% equity and 50% debt.

24. Which of the following is a key determinant of operating leverage?

a. Sales variability.
b. Physical location of production facilities, for example in a high tax state.
c. Cost of debt.
d. Capital structure.
e. Level of fixed costs.

25. Which of the following statements is most correct?
a. When financial leverage is used, the firm incurs financial risk and this, in turn, magnifies its business risk.
b. While financial risk varies from one industry to another and can change over time, it affects all firms equally within a particular industry.
c. Maintaining financial flexibility translates into maintaining adequate reserve borrowing capacity.
d. The optimal capital structure is the one that maximizes EPS, and this requires a debt ratio which is lower than the one that maximizes expected stock price.
e. The optimal capital structure calls for a debt ratio that simultaneously maximizes EBIT and EPS.