一、選擇題（60%，每題3分，單選題，不倒扣）

1. The basic variables that must be considered in determining the initial investment associated with a capital expenditure are all of the following EXCEPT
   (A) incremental annual savings produced by the new asset.  (B) cost of the new asset.
   (C) proceeds from the sale of the existing asset.  (D) taxes on the sale of an existing asset.

2. The underlying cause of conflicts in ranking for projects by internal rate of return and net present value method is
   (A) the reinvestment rate assumption regarding intermediate cash flows.
   (B) that neither method explicitly considers the time value of money.
   (C) the assumption made by the IRR method that intermediate cash flows are reinvested at the cost of capital.
   (D) the assumption made by the NPV method that intermediate cash flows are reinvested at the internal rate of return.

3. Firms underprice new issues of common stock for the following reasons:
   (A) when the market is in equilibrium, additional demand for shares can be achieved only at a lower price.
   (B) when additional shares are issued, each share’s percent of ownership in the firm is diluted, thereby justifying a lower share value.
   (C) Many investors view the issuance of additional shares as a signal that management is using common stock equity financing because it believes that the shares are currently overpriced.
   (D) All of the above.

4. In comparing the constant growth model and capital asset pricing model (CAPM) to calculate the cost of common stock equity,
   (A) the constant growth model ignore risk, while the CAPM directly considers risk as reflected in the beta.
   (B) the CAPM directly considers risk as reflected in the beta, while the constant growth model uses the market price as a reflection of the expected risk-return preference of investors.
(C) the CAPM directly considers risk as reflected in the beta, while the constant growth model uses dividend expectation as a reflection of risk.

(D) the CAPM indirectly considers risk as reflected in the market return, while the constant growth model uses dividend expectations as a reflection of risk.

5. The inexpensive nature of long-term debt in a firm’s capital structure is due to the fact that
   (A) the equity holders are the true owners of the firm.
   (B) equity capital has a fixed return.
   (C) creditors have a higher position in the priority of claims.
   (D) dividend payments are tax-deductible.

6. Modigliani and Miller suggest that the value of the firm is not affected by the firm’s dividend policy, due to
   (A) the relevance of dividends.  (B) the clientele effect.
   (C) the informational content  (D) the optimal capital structure.

7. The key motives for using convertible securities in the firm’s financing mix include all of the following EXCEPT
   (A) a form of deferred stock financing.  (B) a sweetener of financing.
   (C) a method of raising temporarily cheap funds.  (D) an eventual shift in the capital structure to a more levered position.

8. An attractive candidate for acquisition through a leveraged buyout should possess all of the following characteristics EXCEPT
   (A) a solid profit history and reasonable expectations for growth.
   (B) low fixed assets.  (C) a low level of debt.  (D) stable and predictable cash flows.

9. As a foreign exchange hedge, currency swaps have all of the following characteristics EXCEPT
   (A) an initial exchange by two parties of two principal amounts in two different currencies.
   (B) principal amounts are reversed at the spot rate at maturity.
(C) each party pays the other’s interest payment.
(D) principal amounts are reversed at a pre-agreed rate at maturity.

10. A firm is analyzing two possible capital structures—30 and 50 percent debt ratios. The firm has total assets of $5,000,000 and common stock valued at $50 per share. The firm has a marginal tax rate of 40 percent on ordinary income. The number of common shares outstanding for each of the capital structures would be:
(A) 30 percent debt ratios: 30,000 shares and 50 percent debt ratios: 50,000 shares.
(B) 30 percent debt ratios: 30,000 shares and 50 percent debt ratios: 7,000 shares.
(C) 30 percent debt ratios: 7,000 shares and 50 percent debt ratios: 100,000 shares.
(D) 30 percent debt ratios: 70,000 shares and 50 percent debt ratios: 50,000 shares.

11. You buy 300 shares of a $40 stock on margin. The initial margin is 55% and the maintenance margin is 40%. Identify: (i) the amount you initially borrow and (ii) the lowest stock price possible before a margin call is made:

<table>
<thead>
<tr>
<th>Initial Loan</th>
<th>Lowest Price Before Margin Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) $6,600</td>
<td>$33.66</td>
</tr>
<tr>
<td>(B) $5,400</td>
<td>$30</td>
</tr>
<tr>
<td>(C) $6,600</td>
<td>$22</td>
</tr>
<tr>
<td>(D) $5,400</td>
<td>$16</td>
</tr>
</tbody>
</table>

12. A highly risk-averse investor is considering the addition of an asset to a 10-stock portfolio. The two securities under consideration both have an expected return, equal to 15 percent. However, the distribution of possible returns associated with Asset A has a standard deviation of 12 percent, while Asset B’s standard deviation is 8 percent. Both assets are correlated with the market with $r=0.75$. Which asset should the risk-averse investor add to his/her portfolio?
(A) Asset A  (B) Asset B  (C) Neither A nor B  
(D) Cannot tell without more information.
13. Which of the following statements is most correct?
   (A) Long-term bonds are less price sensitive to a given change in the yield to maturity than are shorter-term bonds.
   (B) High-coupon bonds are less price sensitive to a given yield to maturity change than are lower-coupon bonds.
   (C) The price sensitivity of a bond increases with its maturity, and this sensitivity increases at an increasing rate as maturity lengthens.
   (D) Bond prices can move directly or inversely with changes in yield to maturity depending on the direction of the change in yield.

14. Firm A and Firm B both have the same net profit margins and total asset turnovers, but Firm A uses more debt in its capital structure than Firm B. Which of the following statements must, therefore, be TRUE?
   (A) Firm A will have a higher ROA than Firm B.
   (B) Firm B will have a higher ROE than Firm A.
   (C) Firm A will have a higher ROE than Firm B.
   (D) Firm B will have a higher ROA than Firm A.

15. If you expect inflation during the next year to be 5% and you desire a 2% real return, according to Fisher's theory you would require
   (A) a real return on T-Bills larger than 7%.  (B) A real return on T-Bills larger than 5%.
   (C) a nominal return on T-Bills less than 7%  (D) None of the above.

16. Which of the following statements is a true definition of an out-of-the-money option?
   (A) A call option in which the exercise price exceeds the stock price.
   (B) A call option in which the stock price exceeds the exercise price.
   (C) A put option in which the exercise price exceeds the stock price.
   (D) A call option in which the call premium exceeds the stock price.
17. Reinvestment risk arises because the yield to maturity computation implicitly assumes that all coupon flows will be reinvested at the
   (A) Coupon rate           (B) Effective rate of interest.
   (C) Realized yield to maturity (D) Promised yield to maturity.

18. A mutual fund typically performs all of the following functions except
   (A) Provides alternative risk-return options.
   (B) Eliminates unsystematic risk.
   (C) Provides diversification.
   (D) Derives a risk-adjusted performance that is consistently superior to risk-adjusted net return of the aggregate market.

19. Which of the following statements about convertible bonds is FALSE?
   (A) Investors enjoy upside potential with limited downside risk.
   (B) The price of a convertible bond is equal to the price of the bond as a straight debt issue plus the value of a call option on the firm's stock.
   (C) The straight debt value of a convertible bond will decrease as the firm's stock price increases.
   (D) When convertible bonds are converted, the proportionate ownership of existing shareholders decreases.

20. An implication of the capital asset pricing model is that investors should
   (A) invest in an equal number of shares of all securities held in the portfolio.
   (B) invest proportionately in a given security based on its market value relative to the market value of all securities.
   (C) invest only in securities that have a beta of 1.0 or less.
   (D) both (A) and (C).
二、計算及闡述題 (40%)

1. “For the CAPM to be correct, the security markets must be efficient.” “For the security markets to be efficient, the CAPM must be correct.” Evaluate these statements.  (10%)

2. The SML states that: \[ E(R_i) = RF + \beta_i [RFm] \]

   Empirical tests of this relationship examine a regression of historical average returns on a beta estimate:
   \[ \bar{R}_i = a_0 + a_1 \beta_i \]

   (a) How are the \( \beta_i \) value obtained?
   If the theory is supported, what should \( a_0 \) and \( a_1 \) turn out to be? (10%)

   (b) What were the major implications of Roll’s critique of the CAPM?  (10%)

3. “Speculation is a zero-sum game across the market at any point in time as well as for any investor over time.” How is this statement related to EMT? (10%)