一. 選擇題 (30%，每題 2 分)

1. The main goal of financial management is to:
   a. avoid financial distress.
   b. minimize operational costs and maximize firm efficiency.
   c. maintain steady growth in both sales and net earnings.
   d. maximize current dividends per share of the existing stock.
   e. maximize the current value per share of the existing stock.

2. An annuity stream where the payments happen forever is called a(n):
   a. annuity due.
   b. amortized cash flow stream.
   c. amortization table.
   d. indemnity.
   e. perpetuity.

3. The highest effective annual rate that can be derived from an annual percentage rate of 8% is computed as:
   a. \(0.08 - 1\).
   b. \(e^{0.08} \times q\).
   c. \(e \times (1 + 0.08)\).
   d. \(e^{0.08} - 1\).
   e. \((1 + 0.08)^6\).

4. Discount cash flows refers to
   a. discount all expected future cash flows to reflect the time value of money.
   b. discount only those cash flows that occur at least 10 years in the future.
   c. estimate only the cash flows that occur in the first 4 years of a project.
   d. multiply expected future cash flows by the cost of capital.
   e. take the cash discount offered on trade merchandise.

5. The rate of return required by investors in the market for holding a bond is called the:
   a. coupon.
   b. yield to maturity.
   c. face value.
   d. maturity.
   e. coupon rate.

6. A bond that does not pay any coupon and is initially priced at a deep discount is called a _____ bond.
   a. Treasury
   b. municipal
   c. zero coupon
   d. floating-rate
   e. junk

7. The total rate of return on a stock could be positive even when the price of the stock falls because of the:
a. dividend yield.
b. capital appreciation.
c. real rate of return.
d. interest yield.
e. supernormal growth.

8. Shareholders generally have the right to:
   I. select the senior management of the firm.
   II. elect the corporate directors.
   III. elect the chief executive officer (CEO).
   IV. elect the chief financial officer (CFO).
   a. I only
   b. I and III only
   c. II only
   d. I and II only
   e. III and IV only

9. United Imports paid a $2.00 per share annual dividend last week. Dividends are expected to increase by 6% annually. What is one share of this stock worth to you today if the appropriate discount rate is 14%?
   a. $33.33
   b. $14.29
   c. $13.12
   d. $25.00
   e. $26.25

10. An investment project is acceptable if its IRR:
    a. is more than the required return.
    b. is less than the required return.
    c. is exactly equal to its net present value (NPV).
    d. is exactly equal to zero.
    e. is exactly equal to 100%.

11. The most valuable investment project given up if an alternative investment is chosen is a(n):
    a. sunk cost.
    b. erosion cost.
    c. salvage value expense.
    d. net working capital expense.
    e. opportunity cost.

12. Risk that affects all assets, each to a greater or lesser degree, is called ______ risk.
    a. systematic
    b. idiosyncratic
    c. diversifiable
    d. firm-specific
    e. total

13. A portfolio contains two risky stocks which turn out to have no diversification benefit. The reason that has no diversification is the returns:
    a. are too small.
    b. are too large to offset.
    c. move perfectly with one another.
    d. move perfectly opposite of one another.
14. MM Proposition I without taxes is used to address:
   a. leverage does not affect the value of the firm.
   b. that one capital structure is as good as another.
   c. the value of an unlevered firm equals that of a levered firm.
   d. capital structure changes have no effect on stockholder's welfare.
   e. All of the above.

15. The reason that MM Proposition I does not hold in the existence of corporate taxation is because:
   a. dividends are no longer relevant with taxes.
   b. earnings per share are no longer relevant with taxes.
   c. bondholders require higher rates of return compared with stockholders.
   d. levered firms pay less taxes compared with identical unlevered firms.
   e. All of the above.

二、(10%) 小佩投資她 70%的資金在台積電上，其餘的 30%投資於宏達電，依據她的預測，這兩檔股票往
後 1年的股價報酬表現將如下表所示：

<table>
<thead>
<tr>
<th></th>
<th>台積電</th>
<th>宏達電</th>
</tr>
</thead>
<tbody>
<tr>
<td>預期報酬率</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>標準差</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>相關係數</td>
<td></td>
<td>0.7</td>
</tr>
</tbody>
</table>

請問小佩投資組合的預期報酬率與標準差各為多少？ (10%)

三、(25%) 聯合公司的總裁要求你評估一新電腦的購置方案。新電腦目前的價格為 70,000 元。此外，
公司最初亦需要一筆 2,000 元的淨營運資金(new working capital)投資。新電腦預計每年可為公司
增加銷貨 32,000 元。新電腦預計可使用 3 年；3 年後，可望出售獲得 10,000 元。3 年後，淨營運
資金回收 2,000 元。新電腦每年的折舊率如下表所示：

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>折舊率</td>
<td>30%</td>
<td>40%</td>
<td>20%</td>
</tr>
</tbody>
</table>

公司的稅率為 40%，該方案的折現率為 10%。試求此一方案各年度現金流量(15%)與該投資計畫淨現
值(NPV)(5%)，公司應否購買此新電腦？(5%)

四、(20%) 小王投資 A、B 兩種股票與無風險資產。A 股票的β值為 0.7，B 股票的β值為 1.2。A、B
兩股票均落在 SML 上。A 股票報酬率的標準差為 20%，B 股票報酬率的標準差為 30%。無風險利率為 4%，市場組合的期望報酬率為 12%，市場組合報酬率的標準差為 10%。某甲總投資金額為 100 萬元，且其投資於無風險資產之金額為 25 萬元。又其希望投資的期望報酬率為 10%。請問小王在 A、B 股票上各應投資多少錢? (15%) 假設 A、B 股票報酬率的相關係數為 0.5，則小王投資組合報酬率標準差多少? (5%)

五、(15%) A company and B company are identical in every way except their capital structures. Each company expects to earn $5 million before interest per year in perpetuity, with each company distributing all its earnings as dividends. A company’s perpetual debt has a market value of $100,000 and costs 10% per year. A company has 20,000 shares outstanding, currently worth $50 per share. B company has no debt and 10,000 shares outstanding, currently worth $120 per share. Neither firm pays taxes. Is A company’s stock a better buy than B company’s stock? Please explain your answer. (15%)