考試科目	財務管理 ~~1711	所別	財務管理研究所	考試時間	2月28日(六)第2節

Part I: 單選題（總分 40%, 每題 4%）

1. Villa Corporation has sales of $640,000 and costs of $480,000. Interest expense is $40,000 and depreciation is $60,000. The tax rate is 34%. What is the net income?
   A. $20,400
   B. $39,600
   C. $50,400
   D. $79,600

2. Book value:
   A. is based on historical cost.
   B. is equivalent to market value for firms with fixed assets.
   C. generally tends to exceed market value when fixed assets are included.
   D. is more of a financial than an accounting valuation.

3. Which of the following best describes how issuing zero-coupon bonds affects a company's financial statements? The company's:
   A. net income is overstated every year until maturity.
   B. cash flow from operations decreases for the life of the bond.
   C. cash flow from investing decreases during the year of maturity.
   D. cash flow from financing increases during the year of issuance.

4. The embedded option that is least likely to be a benefit to the issuer of debt securities is:
   A. floor on a floater.
   B. right to call the issue.
   C. accelerated sinking fund provision.
   D. right of the underlying borrowers in a pool of loans to repay an amount in excess of the scheduled principal payment.

5. Capital structure decisions include consideration of the:
   I. current assets and liabilities.
   II. cost of acquiring funds.
   III. amount of long-term debt to assume.
   IV. net working capital.
   A. I and II only
   B. II and III only
   C. III and IV only
   D. I, II, and IV only

6. The three parts of the Du Pont identity can be generally described as:
   I. operating efficiency, asset use efficiency and firm profitability.
   II. financial leverage, operating efficiency and asset use efficiency.

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

考 試 科 目	財務管理 41711	所 別	財務管理研究所	考試時間	2 月 28 日(六)第 2 節

III. the equity multiplier, the profit margin and the total asset turnover.
IV. the debt-equity ratio, the capital intensity ratio and the profit margin.
A. I and II only
B. I and IV only
C. II and III only
D. I and III only

7. A fixed income manager wants to take advantage of a forecast decline in interest rates over the next several months. Which of the following combinations of maturity and coupon rate would most likely result in the largest increase in portfolio value?
A. maturity: year 2020; coupon: 0%
B. maturity: year 2020; coupon: 12%
C. maturity: year 2030; coupon: 10%
D. maturity: year 2030; coupon: 12%

8. Which of the following statements is false?
A. It is possible that an IRR does not exist for an investment opportunity.
B. If the payback period is less than a pre-specified length of time you accept the project.
C. The internal rate of return (IRR) investment rule is based upon the notion that if the return on other alternatives is greater than the return on the investment opportunity you should undertake the investment opportunity.
D. It is possible that there is no discount rate that will set the NPV equal to zero.

9. Johnland Corp. has just paid a dividend of $2.25. These dividends are expected to grow at a rate of 5% in the foreseeable future. The risk of this company suggests that future cash flows should be discounted at a rate of 11%. Which of the following amounts is closest to what should be paid for Johnland Corp.'s common stock?
A. $47.70
B. $39.38
C. $37.50
D. $20.45

10. Which of the following statements is false?
A. An investor's preferences will determine only how much to invest in the tangent or efficient portfolio versus the risk-free investment.
B. Conservative investors will invest a small amount in the tangent or efficient portfolio, choosing a portfolio on the line near the risk-free investment.
C. Only aggressive investors will choose to hold the portfolio of risky assets, the tangent or efficient portfolio.

備 註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

考 試 科 目	財務管理 41711	所 別	財務管理研究所	考 試 時 間	2 月 28 日(六)第2節

D. Aggressive investors will invest more in the tangent portfolio choosing a portfolio that is near the tangent portfolio or even beyond it by buying stocks via borrowing.

Part II: 計算題 (總分 60%, 每題 10%)

1. (10%) You are enrolling in an MBA program. To pay your tuition, you can either take out a standard student loan (the interest payments are not tax deductible) with an effective annual rate (EAR) of 5.5%, or you can use a tax-deductible home equity loan with an annual percentage rate (APR) of 6% with monthly compounding. Assume that your tax rate is 15%. Which loan should you use?

2. (10%) Consider the following information about Stocks X and Y:

State of Economy	Probability of State of Economy	Rate of Return if State Occurs: Stock X	Rate of Return if State Occurs: Stock Y
Recession	0.25	0.11	−0.40
Normal	0.50	0.29	0.10
Boom	0.25	0.13	0.56

The market risk premium is 8%, and the risk-free rate is 4%.

(a) (5%) Which stock has the most total risk?

(b) (5%) Which stock has the most systematic risk?

3. (10%) The Sunny Corp. is unlevered and is valued at $640,000. Sunny Corp. is currently deciding whether including debt in its capital structure would increase its value. The current cost of equity is 12%. Under consideration is issuing $300,000 in new debt with an 8% interest rate. Sunny Corp. would repurchase $300,000 of stock with the proceeds of the debt issue. There are currently 32,000 shares outstanding and its effective marginal tax bracket is zero.

(a) (5%) What is the cost of levered equity?

(b) (5%) What will Sunny Corp. new WACC be?

4. (10%) Consider a European put and a European call on the same stock. The options are written at the same time, have the same strike price, and the same expiration date. Suppose the strike price X is equal to the price of the stock at the time the options are written. Which option will have a larger price? (You need to support your answer with a proof for this question.)

5. (10%) An analyst determines the following information about a semiannual coupon bond:

Par value	$1,000
Modified duration	10
Current price	$800
Yield to maturity (YTM)	8%

備 註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。

考 試 科 目	財務管理 41711	所 別	財務管理研究所	考試時間	2 月 28 日(六) 第2節

If the YTM increases to 9 percent, what is the predicted price using the duration concept?

6. (10%) Suppose that the return of the market portfolio is equally likely to increase by 24% or decrease by 8%. The return of security "PP" goes up on average by 29% when the market goes up and goes down by 11% when the market goes down. The return of security "QQ" goes down on average by 16% when the market goes up and goes up by 16% when the market goes down. The return of security "MM" goes up on average by 4% when the market goes up and goes up by 4% when the market goes down.

   (a) (3%) What is the beta for securities "PP", "QQ", and "MM"?

   (b) (3%) What is the expected return on the market portfolio?

   (c) (4%) What is the expected return on security with a beta of 0.8?

備 註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。