

題號：270

國立臺灣大學114學年度碩士班招生考試試題

科目：財務管理

節次：8

題號：270

共 6 頁之第 1 頁

注意：第一大題選擇題考生應作答於「答案卡」。

第一大題：單選題（共五十分；每題五分）。注意：此一大題應作答於「答案卡」。

1. The pecking order theory states that companies should prioritize their sources of financing from _____, to _____.
(A) internal financing, debt, equity
(B) internal financing, equity, debt
(C) debt, internal financing, equity
(D) equity, internal financing, debt
(E) debt, equity, internal financing
2. Which of the following statements is correct?
(A) IPO underpricing may be related to firms' positive signaling motives.
(B) IPO underpricing is unique to the U.S. financial markets.
(C) Firms can always profit from an IPO due to winner's curse.
(D) IPO underpricing is the decrease in stock value from the initial offering price to the first-day closing price.
(E) IPO underpricing may be caused by investor under-reaction causing spikes on the initial days of trading.
3. If you invest \$100 for 3 years at 12% compounded semi-annually, your investment will grow to?
(A) \$137.85
(B) \$139.85
(C) \$141.85
(D) \$143.85
(E) \$145.85
4. What is the effective annual rate of return (EAR) of your investment in Question 3?
(A) 11.36%
(B) 12.36%
(C) 13.36%
(D) 14.36%
(E) 15.36%

見背面

題號： 270

國立臺灣大學114學年度碩士班招生考試試題

科目：財務管理

節次： 8

題號：270

共 6 頁之第 2 頁

5. You are offered with five mutually-exclusive risk-free investments. Which of the following should you pick, other things equal?
- (A) Investing \$100 at 10% compounded annually
 - (B) Investing \$100 at 10% compounded semi-annually
 - (C) Investing \$100 at 10% compounded quarterly
 - (D) Investing \$100 at 10% compounded daily
 - (E) Investing \$100 at 10% compounded continuously
6. Which of the following activities does not increase cash?
- (A) Increase long-term debt
 - (B) Repurchase equity
 - (C) Sell current assets other than cash
 - (D) Sell equipments
 - (E) Sell excess inventory
7. You are offered an investment that promises to pay you \$10,000 in a year. The investment costs you \$9,500 now. Assume an appropriate annual discount rate of 10%. What is the NPV of this investment?
- (A) -\$410
 - (B) -\$310
 - (C) -\$210
 - (D) -\$110
 - (E) -\$10
8. A firm is estimated to have a weighted average cost of capital (WACC) of 16%, a cost of debt of 10%, and a cost of equity of 22%. The market value of the firm's equity is \$200. What is the market value of the firm's debt? Ignore taxes.
- (A) \$50
 - (B) \$100
 - (C) \$150
 - (D) \$200
 - (E) \$250
9. A firm wants to have a weighted average cost of capital (WACC) of 8%. The firm has an after-tax cost of debt of 4% and a cost of equity of 12%. What debt-to-equity ratio is needed for the firm to achieve the targeted WACC? Assume a tax rate of 21%.
- (A) 0.25

接次頁

題號： 270

國立臺灣大學114學年度碩士班招生考試試題

科目：財務管理

節次： 8

題號：270

共 6 頁之第 3 頁

- (B) 0.50
- (C) 0.75
- (D) 1.00
- (E) 1.25

10. According to the capital asset pricing model (CAPM), fairly-priced securities have _____.

- (A) positive betas
- (B) positive alphas
- (C) negative alphas
- (D) zero alphas
- (E) zero betas

第二大題：填充題（共五十分）

注意事項：

※※非選項問題(第 16 題)，請詳列計算過程(請至少計算至小數點後第二位)，若只有答案將不予計分※※

※※一律作答於所附之考試答案卷(本)上。若於試題卷上作答者，將不予計分※※

※※答案請於答案卷(本)上標示清楚，如 ANS: _____※※

※※第 16 題(共兩小題)各 5 分，其餘大題每題 5 分※※

11. A discount bond that pays interest semiannually will:

- (A) Its coupon rate is higher than yield to maturity, assuming everything else equal
- (B) Have a lower price than an equivalent annual payment bond
- (C) Have a higher EAR than an equivalent annual payment bond
- (D) Sell for less than its conversion value

12. Caterpie stock has the following probability distribution of expected prices one year from now:

State	Probability	Price
1	15%	\$85
2	45%	\$110
3	40%	\$125

見背面

If you buy Caterpie today for \$100 and it will pay a dividend during the year of \$6 per share, what is your expected holding-period return on Caterpie?

- (A) 16.12%
- (B) 17.27%
- (C) 17.91%
- (D) 18.01%
- (E) 18.25%

13. Weedlwe invest \$200 in a risky asset with an expected rate of return of 0.26 and a standard deviation of 0.29 and a T-bill with a rate of return of 0.03.

A portfolio that has an expected outcome of \$280 is approximately formed by:

- (A) investing \$200 in the risky asset.
- (B) investing \$126 in the risky asset and \$74 in the risk-free asset.
- (C) borrowing \$122 at the risky asset rate and investing the total amount \$322 in the T-bill.
- (D) investing \$22 in the risky asset and \$78 in the riskless asset.
- (E) borrowing \$122 at the risk-free rate and investing the total amount \$322 in the risky asset.
- (F) such a portfolio cannot be formed.

14. Consider a T-bill with a rate of return of 5% and the following risky securities:

Security A: $E(r) = 0.20$; Variance = 0.03

Security B: $E(r) = 0.15$; Variance = 0.025

Security C: $E(r) = 0.18$; Variance = 0.012

Security D: $E(r) = 0.19$; Variance = 0.056

From which set of portfolios, formed with the T-bill and any other of the four risky securities, would a risk-averse investor always choose her portfolio?

- (A) The set of portfolios formed with the T-bill and security A.
- (B) The set of portfolios formed with the T-bill and security B.
- (C) The set of portfolios formed with the T-bill and securities B and C.
- (D) The set of portfolios formed with the T-bill and security C.
- (E) The set of portfolios formed with the T-bill and security D.
- (F) The set of portfolios formed with the T-bill and securities A and D.
- (G) Cannot be determined

15. Three years ago you purchased a bond for \$888. The bond had three years to maturity, a coupon rate of 9%, paid annually, and a face value of \$1,000. Each year you reinvested all coupon interest at the prevailing

題號： 270

國立臺灣大學114學年度碩士班招生考試試題

科目：財務管理

節次： 8

題號：270

共 6 頁之第 5 頁

reinvestment rate shown in the table below. Today is the bond's maturity date. What is your realized compound yield on the bond?

Time	Prevailing reinvestment rate
0 (purchase date)	6.66%
1	7.77%
2	8.88%
3	9.99%

- (A) 8.33%
- (B) 9.76%
- (C) 10.43%
- (D) 12.07%
- (E) 13.36%

16. You purchased a zero-coupon bond that has a face value of \$1,000, six years to maturity, and a yield to maturity of 6.4%. It is one year later and similar bonds are offering a yield to maturity of 7.1%. You will sell the bond now. You have a tax rate of 35% on regular income and 12% on capital gains.

Calculate the following for this bond:

The before-tax rate of return on this investment? (1)

The after-tax rate of return on this investment? (2)

17. Next year's earnings are estimated to be \$18. The Golbat company plans to reinvest 22% of its earnings at 15%. If the cost of equity is 9.5%, what is the present value of growth opportunities?

- (A) \$18
- (B) \$26.45
- (C) \$36.98
- (D) \$290.32
- (E) \$189.47
- (F) \$100.85

18. The free cash flow to the firm is reported as \$288 million. The interest expense to the firm is \$11 million. If the tax rate is 32% and the net debt of the firm increased by \$30 million, what is the approximate market value of the firm if the free cash flow to equity grows at 5% and the cost of equity is 15%?

- (A) \$2,174 billion
- (B) \$2,945 billion
- (C) \$3,105 billion

見背面

題號： 270

國立臺灣大學114學年度碩士班招生考試試題

科目：財務管理

節次： 8

題號：270

共 6 頁之第 6 頁

(D) \$3,224 billion

(E) \$3,260 billion

19. \$1,000 par value zero-coupon bonds (suppose no liquidity premiums)

Bond	Years to Maturity	Yield to Maturity
A	1	7.00%
B	2	7.20%
C	3	8.13%
D	4	8.99%
E	5	11.56%

The expected 2-year interest rate 3 years from now should be _____.

(A) 7.20%

(B) 8.13%

(C) 12.53%

(D) 15.49%

(E) 16.91%

試題隨卷繳回