※ 注意：請於試卷內之「非選擇題作答區」依序作答，並應註明作答之部份及題號。

第一部分：是非題 (40%)

1. Working Capital Management Policy (是非題; T for True and X for False): 10%

(　) (1) If a firm's days in inventory is 45, account receivable days is 60, and the account payable days is 30, then the firm's cash conversion cycle is 45.

(　) (2) If a firm adopts a flexible short term financing strategy, the firm may have less current assets.

(　) (3) If a firm adopts a flexible short term financing strategy, the firm may have more short term debts.

(　) (4) If a firm adopts a restricted short term financing strategy, the firm may need short term financing in low seasons.

(　) (5) The higher the costs of short of stock, the higher the inventory, other things being equal.

2. Capital Structure (是非題; T for True and X for False):20%

(　) (1) MM theory assumes no agency problems in the economy.

(　) (2) MM theory allows financial distress in the economy.

(　) (3) MM theory assumes a perfect competition market structure in the economy.

(　) (4) MM theory implies an efficient capital market.

(　) (5) MM theory assumes that firm and investors have different borrowing cost.

(　) (6) In the MM economy without tax, firm value increases with leverage.

(　) (7) In the MM economy with tax, equity value increases with leverage.

(　) (8) Pecking order theory asserts that the information cost of internal financing is higher than that of external financing.

(　) (9) Pecking order theory prefers that firms have financial slack.

(　) (10) Pecking order theory asserts trade-off relationship between internal financing and external financing.

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3. Dividend Policy (是非題; T for True and X for False): 10%

( ) (1) In the MM economy, dividend policy affects equity value.

( ) (2) Share repurchase tends to depress stock price.

( ) (3) The common dividend policy practice is maintaining a stable dividend payout.

( ) (4) Birds in hand theory assets that cash dividend has less uncertainty than future capital gain.

( ) (5) A firm paying out most of its earning signals that it has strong growth opportunities.

第二部分：填空題 (60%)

1. Company ABC has the following balance sheet, in million $.

Current Assets	40	Debt	75
Plant and Equipment	85	Equity	50
Total Assets	125	Firm Value	125

The opportunity cost of capital of investing ABC's assets in given by r=15%. Costs of debt are given by r_D=7%. The Corporate tax rate (T_C) is equal to 35%.

The cost of equity (r_E) is____________ (3 分) and the ('after tax') weighted average cost of capital (WACC) is _ (3 分).

The company considers replacing $25 million of equity by long term debt. Because of increased leverage, the cost of debt is set to 8%. The WACC under this new capital structure is _______________ (5 分).

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2. Which of the following bonds will have the greatest percentage increase in value if all interest rates decrease by 1 percentage? _________ (3 分)

a. 20-year, zero coupon bond.

b. 10-year, zero coupon bond.

c. 20-year, 10 percent coupon bond.

d. 20-year, 5 percent coupon bond.

e. 10-year, 10 percent coupon bond.

3. You can invest $10,000 in a certificate of deposit (CD) offered by your bank. The CD is for 5 years and the bank quotes you a rate of 4.5%. You will have $__________(3 分) in 5 years if the 4.5% is an EAR (effective annual rate). You will have $__________ (3 分) in 5 years if the 4.5% is a monthly APR (annual percentage rate). (請四捨五入至小數點後第二位)

4. The Consider the following three stocks.

(a) Stock A is expected to pay a dividend of $2.20 per share forever-no growth or decline.

(b) Stock B will pay a dividend of $1.40 next year. Dividends are expected to grow at 3% per year forever.

(c) Stock C is recovering from several years of losses, during which its dividend was cut to $.50 per year. The now-profitable company is expected to increase dividends by $.50 per year for four years (DIV1=$1.00, DIV2=$1.50, DIV3=$2.00, DIV4=$2.5). Thereafter dividends are not expected to grow or decline.

The cost of capital is 9.5%. How much is each stock worth today?

(a) Price of Stock A= __________(4 分)

(b) Price of Stock B= __________(4 分)

(c) Price of Stock C= __________(4 分)

5. DEF Corporation is trying to decide whether to undertake an expansion of its production facilities. The expansion will cost $8.5 million, to be paid immediately. After-tax cash flows generated by the expansion are

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projected to be $1 million next year, and will be growing indefinitely with inflation at 2.5% per year. Assume that the CAPM holds, the beta of DEF assets is 1.2, the riskless rate is 5% per year (and the yield curve is flat at this rate) and that the expected return on the market portfolio is 12%. The NPV of the expansion is _________ (3 分) million. Should DEF undertake the expansion? ________ (請回答 Yes or No，2 分).

6. Your company considers a new investment project, which lasts for three years. The project requires a purchase of a new machine, which costs $600,000. This initial investment can be depreciated to zero over the next three years according to a straight line depreciation rule. The machine has no salvage value at the end. Operating revenue is projected to be $400,000 per year. Operating costs for raw materials are $100,000 per year. The corporate tax rate is 30% and the risk-adjusted discount rate is 10%. The NPV of this project is ____________ (3 分). Should we take the project? ____________ (請回答 Yes or No，2 分).

7. You have to pick among three mutually exclusive projects with the following cash flows to the firm:

Year	Project A	Project B	Project C
0	-$10,000	$5,000	-$15,000
1	$8,000	$5,000	$10,000
2	$7,000	-$8,000	$10,000

Which project would you pick using the internal rate of return (IRR)? _______ (請四捨五入至小數點後第二位，3 分)

The IRR of this picked project is____________.(請四捨五入至小數點後第二位，3 分)

8. Billick Brothers is estimating its WACC. The company has collected the following information:

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- Its capital structure consists of 40 percent debt and 60 percent common equity.
- The company has 20-year bonds outstanding with a 9 percent annual coupon that are trading at par.
- The company's tax rate is 40 percent.
- The risk-free rate is 5.5 percent.
- The market risk premium is 5 percent.
- The stock's beta is 1.4.

What is the company's WACC?__________ (3 分)

a. 9.71%

b. 9.66%

c. 8.31%

d. 11.18%

9. Flaherty Electric has a capital structure that consists of 70 percent equity and 30 percent debt. The company's long-term bonds have a before-tax yield to maturity of 8.4 percent. The company uses the DCF (discounted cash flow) approach to determine the cost of equity. Flaherty's common stock currently trades at $40.5 per share. The year-end dividend (D1) is expected to be $2.50 per share, and the dividend is expected to grow forever at a constant rate of 7 percent a year. The company estimates that it will have to issue new common stock to help fund this year's projects. The company's tax rate is 40 percent. What is the company's weighted average cost of capital, WACC?___________ (3 分)

   a. 10.73%

   b. 10.30%

   c. 11.31%

   d. 7.48%

10. You have decided to invest all your wealth in two mutual funds: A and B. Their returns and risks are as follows:

- The mean returns are $\tilde{r}_A = 15\%$ and $\tilde{r}_B = 11\%$

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● The covariance matrix is

	r_A	r_B
r_A	0.04	0.025
r_B	0.025	0.032

You want your total portfolio to yield a return of 12%. What is the standard deviation of the return on your portfolio?____________(3 分)

11. Your future father-in-law shows you his portfolio:

Assets	**Holdings**
Cash	$50,000
S&P 500 Index Fund	$100,000
Analog Devices Inc.	$200,000

The risk-free rate is 6% per year, the average return on the market portfolio is 12%, the beta of the S&P index is 1.0, and the beta of Analog Devices is 1.5. What is the expected rate of return on the portfolio, assuming the CAPM holds? ____________ (3 分)