

東吳大學 110 學年度碩士班研究生招生考試試題

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系級	國際經營與貿易學系碩士班 A 組(國際貿易與金融)	考試時間	100 分鐘
科目	財務管理	本科總分	100 分

※一律作答於答案卷上(題上作答不予計分)；並務必標明題號，依序作答。

注意：選擇題與計算題，皆須寫計算過程，否則不計分

一 選擇題，60%分，每題 4 分

- 1) You decide you want your child to be a millionaire. You have a son today and you deposit \$10,000 in an investment account that earns 7% per year. The money in the account will be distributed to your son whenever the total reaches \$1,500,000. How old will your son be when he gets the money (rounded to the nearest year)?
A) 82 years B) 74 years C) 60 years D) 49 years

- 2) Assume that you expect to hold a \$20,000 investment for one year. It is forecasted to have a year end value of \$21,000 with a 30% probability; a year end value of \$24,000 with a 45% probability; and a year end value of \$30,000 with a 25% probability. What is the standard deviation of the holding period return for this investment?
A) 12.06% B) 14.36% C) 16.36% D) 33.45%

- 3) A \$1,000 par value 4-year bond with a 10 percent coupon rate recently sold for \$965. The yield to maturity is
A) 11.13%. B) 10.20%. C) 12.87%. D) 8.50%.

- 4) You purchased 500 shares of A.M.J. Inc. common stock one year ago for \$50 per share. You received a dividend of \$2 per share today and decide to take your profits by selling at \$54.50 per share. What is your holding period return?
A) 13.0% B) 9.0% C) 6.5% D) 4.0%.

- 5) Surf and Spray Inc. has a beta equal to 1.8 and a required return of 15% based on the capital asset pricing model (CAPM). If the risk-free rate of return is 4.2%, the expected return on the market portfolio is
A) 21%. B) 19.2%. C) 13.4%. D) 10.2%.

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Bavarian Brewhouse

Capital Structure Information for Bavarian Brewhouse

Debt (in million)	\$25
Preferred Stock (in million)	\$ 5
Common Stock (in million)	<u>\$45</u>
Total Capital	\$75
Cost of debt	8%
Annual Preferred Stock Dividend	\$2.50
Preferred Stock Market Price	\$16.13
Common Stock Beta	0.85
Risk free rate	3.75%
Expected return on market portfolio	17.55%

- 6) What is Bavarian Brewhouse's cost of preferred stock?
A) 8.00%. B) 15.5%. C) 10.7%. D) 12.6%.
- 7) What is Bavarian Brewhouse's cost of common equity?
A) 10.67%. B) 12.55%. C) 16.23%. D) 15.48%.
- 8) What is Bavarian Brewhouse's after tax cost of debt, if their marginal tax rate equals 34%?
A) 8.00%. B) 5.28%. C) 6.95%. D) 2.72%.
- 9) What is Bavarian Brewhouse's weighted average cost of capital (WACC) if their marginal tax rate equals 34%
A) 12.08%. B) 12.99%. C) 13.44%. D) 5.28%.
- 10) Suppose a particular investment project will require an initial cash outlay of \$1,000,000 and will generate a cash inflow of \$500,000 in each of the next three years. What is the project's internal rate of return (IRR)? Suppose a company's discount rate is 15%, should it accept the project?
A) 23%; reject the project B) 23%; accept the project
C) 15%; reject the project D) 15%; accept the project
- 11) Backford Company just paid a dividend yesterday of \$2.25 per share. The company's stock is currently selling for \$60 per share, and the required rate of return on Backford Company stock is 16%. What is the growth rate expected for Backford Company dividends assuming constant growth?
A) 9.47% B) 9.89% C) 10.87% D) 11.81%

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12) Smith Manufacturing Inc. expects the following results in year one of a new project:

Revenue	\$400,000
Cash Expenses	150,000
Depreciation	<u>90,000</u>
EBIT	\$160,000
Taxes	<u>48,000</u>
Net Income	<u>\$112,000</u>

The annual change in operating cash flow is equal to

A) \$298,000. B) \$202,000. C) \$160,000. D) \$250,000.

13) A new project is expected to generate \$800,000 in revenues, \$250,000 in cash operating expenses, and depreciation expense of \$150,000 in each year of its 10-year life. The corporation's tax rate is 35%. The project will require an increase in net working capital of \$85,000 in year one and a decrease in net working capital of \$75,000 in year ten. What is the free cash flow from the project in year one?

A) \$298,000 B) \$375,000 C) \$380,000 D) \$410,000

14) Suppose the current exchange rates are 1.3215 dollars per euro, and 84.19 yen per dollar. What is the current exchange rate between yen and euros?

A) 63.707 yen per euro B) 147.571 yen per euro
C) 151.696 yen per euro D) 111.257 yen per euro

15) Assume that the British pound is worth 1.6242 U.S. dollars. If a new Jaguar costs USD \$138,000, what is the cost in British pounds?

A) 224,140 B) 84,965 C) 71,642 D) 119,998

二、計算題(40%)

1. (20%) You are considering a project with an initial cash outlay of \$100,000 and expected free cash flows of \$60,000 at the end of each year for 2 years. The required rate of return for this project is 10 percent.

- a. What is the project's payback period?
- b. What is the project's net present value (NPV)?
- c. What is the project's profitability index(PI)?
- d. What is the project's internal rate of return (IRR)?

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2. (20%). Cartwell Products has compiled the data shown in the following table for the current costs of its three basic sources of capital - long-term debt, preferred stock, and common stock equity - for various ranges of new financing.

Source of capital	Range of new financing	After-tax cost
Long-term debt	\$0 to \$320,000	6%
	\$320,000 and above	8%
Preferred stock	\$0 and above	17%
Common stock equity	\$0 to \$200,000	20%
	\$200,000 and above	24%

The company's capital structure weights used in calculating its weighted average cost of capital are shown in the following table.

Source of capital	Weight
Long-term debt	40%
Preferred stock	20%
Common stock equity	40%
Total	<u>100%</u>

- a. Determine the *break points* and ranges of *total* new financing associated with each source of capital.
- b. Using the data developed in part a, determine the break points (levels of *total* new financing) at which the firm's weighted average cost of capital will change.
- c. Calculate the weighted average cost of capital for each range of total new financing found in part b. (hint: there are three ranges.)
- d. Using the results of part c, along with the following information on the available investment opportunities draw the firm's weighted marginal cost of capital (MCC) schedule and investment opportunity schedule (IOS) on the same set of axes.

Investment opportunity	IRR(%)	Initial investment
A	19	200,000
B	15	300,000
C	22	100,000
D	14	600,000
E	23	200,000
F	13	100,000
G	21	300,000
H	17	100,000
I	16	400,000

- e. Which, if any, of the available investment do you recommend that the firm accept? Explain your answer.