

國立臺北大學 115 學年度日間學士班轉學生招生考試試題

學制系級：金融與合作經營學系日間學士班 3 年級

科目：財務管理

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可 不可 使用計算機

1. (28 points) Suppose you borrowed \$800,000 at an annual interest rate of 5% for 4 years, to be repaid in equal annual installments. Please complete the following amortization schedule. Round all amounts to the nearest dollar.

Year	Beginning Balance	Annual Payment		Ending Balance
		Interest Paid	Principal Paid	
1	800,000			
2				
3				
4				0

2. (20 points, 10 points for each) A company is evaluating two mutually exclusive investment projects, Project X and Project Y. The expected cash flows (in millions of dollars) are given below. The firm's cost of capital is 12%.

Project	Year-0	Year-1	Year-2	Year-3
X	-1,500	1,200	800	100
Y	-1,500	0	0	2,400

- (a) Calculate the NPV of Projects X and Y. Based on the NPV rule, which project should the company choose if the firm must select one of the two projects? Show all calculations. Round your answers to two decimal places where appropriate.
- (b) Calculate the Discounted Payback Period for Projects X and Y. If the project rankings differ from those implied by the NPV criterion, which criterion should the company rely on when making its investment decision? Briefly explain.
3. (20 points) The following information is available for two firms in the same industry.

Item	Firm A	Firm B
Net Income	\$60 million	\$60 million
Sales	\$1,200 million	\$800 million
Total Assets	\$600 million	\$400 million
Total Equity	\$300 million	\$150 million

First, calculate the profit margin, total asset turnover, equity multiplier, and ROE for each firm. Then, using the DuPont framework, explain why two firms with the same net income may have different ROEs.

4. (20 points) Discuss the relationship among the Single-Index Model, the CAPM, and the Fama-French models. In particular, explain how risk is measured and priced in each model.
5. (12 points) Explain the role of executive stock options in corporate governance. Discuss one potential benefit and one potential drawback of this form of compensation.

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