

考 試 科 目	財務管理 4122B	系 所 別	金融學系/財務工程組	考 試 時 間	2 月 18 日(六) 第一節
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I. Explain the following term briefly (24 points, each 4 points)

1. Simple interest.
2. The present value of a perpetuity
3. Junk bonds.
4. Yield to maturity.
5. Strong-form efficiency.
6. DOL

II. Computational Questions (30 points, each 5 points)

1. How much must be invested today in order to generate a 5-year annuity of \$1,000 per year, with the first payment 1 year from today, at an interest rate of 12%?
2. What is the coupon rate for a bond with 3 years until maturity, a price of \$1,053.46, and a yield to maturity of 6%? Interest is paid annually.
3. What would be the approximate expected price of a stock when dividends are expected to grow at a 25% rate for 3 years, then grow at a constant rate of 5%, if the stock's required return is 13% and next year's dividend will be \$4.00?
4. What is the value of the PVGO for a stock with a current price of \$50, expected earnings of \$6 per share, and a required return of 20%?
5. Because of its age, your car costs \$4,000 annually in maintenance expense. You could replace it with a newer vehicle costing \$8,000. Both vehicles would be expected to last 4 more years. If your opportunity cost is 8%, by how much must maintenance expense decrease on the newer vehicle to justify its purchase?
6. Where will the following projects plot in relation to the security market line if the risk-free rate is 6% and the market risk premium is 9%? Which projects should be undertaken?

Project	Beta	IRR
A	2.0	25%
B	1.6	22%
C	1.1	15%
D	0.8	11%

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III. Short Answer Questions (12 points)

1. The use of NPV as an investment criterion is said to be more reliable than using IRR. Discuss potential problems with the use of IRR. (8 points)
2. What is the difference between unique risk and market risk to the holder of a diversified portfolio? (4 points)

IV. Questions (34 points)

1. Calculate the expected return (4 points), variance (4 points), and standard deviation (2 points) for an equally weighted portfolio of Stocks A and B given the following:

Scenario:	Probability	Return on A	Return on B
Recession	25%	-4%	9%
Normal	40%	8%	4%
Boom	35%	20%	-4%

2. Calculate the nominal return, real return, nominal risk premium, and real risk premium for the following common stock investment: (Show your work) (16 points, each 4 points)

Purchase price	\$60 per share
Dividend	\$3.50 per share per year
Sales price	\$73 per share
Holding period	1 year
Treasury bill yield	8.5%
Inflation rate	7.5%

3. Determine the expected return on equity for a firm with a WACC of 12%, \$500,000 in 9% debt, and \$800,000 in equity. Both debt and equity are shown at market values, and the firm pays no taxes. How can the expected return on equity be reduced? (8 points, each 4 points)

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- 一、作答於試題上者，不予計分。
- 二、試題請隨卷繳交。