

1. Bond Valuation (25%)

- a. Define the following terms: current yield (on a bond); yield to maturity (YTM); yield to call (YTC). 9%
- b. Suppose Ford Motor Company sold an issue of bonds with a 10-year maturity, a \$1000 par value, a 10 percent coupon rate, and semiannual interest payment. 16%
- (1) Two years after the bonds were issued, the going interest rate had declined to 6 percent. At what price would the bonds sell?
- (2) Suppose that the conditions in part (1) existed—that is, interest rates fell to 6 percent 2 years after the issue date. Suppose further that the interest rate remained at 6 percent for the next 8 years. What would happen to the price of the Ford Motor Company bonds over time?

2. Capital Asset Pricing Model (25%)

- a. Define the following terms: capital asset pricing model; market risk premium; beta coefficient. 9%
- b. Suppose that risk-free rate is 5 percent and the market risk premium is 6 percent. What is the expected return for the overall stock market? What is the required rate of return on a stock that has a beta of 1.2? 6%
- c. Suppose you hold a diversified portfolio consisting of a \$7500 investment in each of 20 different common stocks. The portfolio beta is 1.12. Now suppose you have decided to sell one of the stocks in your portfolio with a beta equal to 1.0 for \$7500 and to use these proceeds to buy another stock for your portfolio. Assume the new stock's beta is equal to 1.75. Calculate your portfolio's new beta. 10%

3. Capital budgeting 25%

- a. Define the following terms: net present value method; internal rate of return method; hurdle rate. 9%
- b. Project S costs \$15000 and is expected to produce cash flows of \$4500 per year for 5 years. Project L costs \$37500 and is expected to produce cash flows of \$11000 per year for 5 years. Calculate the two project's NPVs, IRRs, Modified IRRs, assuming a cost of capital of 14 percent. Which project would be selected, assuming they are mutually exclusive, using each ranking method? Which should actually be selected? 16%

4. Derivatives and Risk Management 25%

- a. Define the following terms: long hedges; Black-Scholes Option pricing model; put option. 9%
- b. A call option on the stock of Bedrock Boulders has a market price of \$7. The stock sells for \$30 a share, and the option has an exercise price of \$25 a share. What is the exercise value of the call option? What is the premium on the option? 9%
- c. List seven reasons risk management might increase the value of a firm. 7%