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No. of pages=3

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SARDAR PATEL UNIVERSITY
VALLABH VIDYANAGAR
MBA IV SEMESTER EXAMINATION 2009

SECURITY ANALYSIS & INVESTMENT MANAGEMENT (FM 202)

DATE: 9-4-2009 **TOTAL MARKS: 60**
TIME: 11.00 A.M. To 1.00 P.M.

1 **ALL QUESTIONS ARE COMPULSORY. THERE ARE FIVE MAIN QUESTIONS AND NUMBER OF SUB-QUESTIONS.**
2 **MARKS TO EACH QUESTION HAVE BEEN GIVEN AGAINST THE QUESTION.**

1 1.1 Suppose you are an executive of Infosys and a large share of your potential income is derived from year-end-bonuses

(a) Would purchase of Infosys stock be an effective headging strategy for you if you are worried about the uncertainly surrounding your bonus? (01)

(b) Would purchase of TCS stock be an effective hedge strategy? (01)

1.2 The coupon rate on a tax-exempt bond is 5.6 %, and the rate on a taxable bond is 8 %. Both bonds sell at par. What is the tax bracket (marginal tax rate) at which an investor would be indifferent between the two bonds? (02)

1.3 Mr. Ram borrowed Rs. 20,000/- on margin to buy shares in Rahim Ltd., which is now selling at Rs. 40/- per share. Ram's account starts at the initial margin requirements of 50 %. The maintenance margin is 35%. Two days later, the stock price falls to Rs. 35/- per share.

(a) Will Ram receive a margin call? (1)

(b) How low can the price of Rahim Ltd. shares fall, before Ram receive a margin call? (2)

1.2 Discuss various assumptions of CAPM. How these assumptions help deriving the model. (05)

2 2.1 Discuss various types of mutual fund products. Which products do you suggest if current recession continues for three more years? Why? (04)

2.2 Discuss the M^2 measure of portfolio performance with the help of an illustration. (02)

2.3 From the following information calculate various performance measures for portfolio 'P' and market 'M'; Sharpe, Jensen (alpha), Treynor and Information ratio. The T-bill rate during the period was 6 %. By which measures did portfolio P out perform the market? (06)

(2)

	Portfolio P	Market M
	35 %	28 %
	1.20	1.00
on	42 %	30 %
atic risk)	18 %	0

3 Su... ou are managing a risky portfolio with expected rate of return ... 18 % and standard deviation of 28 %.The T-bill rate is 8 %.

(a) Your client choses to invest 70 % of a portfolio in your fund and 30 % in a T-bill money market fund. What is the expected value and standard deviation of the rate of return on his portfolio? (02)

(b) Suppose that your risky portfolio includes the following investments in the given proportions:
Stock A: 25%, Stock B: 32%, Stock C: 43%. What are the investment proportions of your client's overall portfolio, including the position in T-bills? (02)

(c) What is the reward – to-variability ratio (S) of your risky portfolio? Your client's? (02)

(d) Draw the CAL of your portfolio on an expected return standard deviation diagram. What is the slope of the CAL? Show the position of your client on your fund's CAL. (02)

(e) Suppose your client's degree of risk aversion is A=3.5; then what proportion, y, of the total investment should be invested in your fund? What is the expected value and standard deviation of the rate of return on your client's optimized portfolio? (04)

4 4.1 Define and discuss EMH various forms and tests conducted to accept or reject these hypotheses. How do these findings affect the fundamental and technical analysis of stock selection? (04)

4.2 Abbey Naylor, CFA, has been directed to determine the value of Sundanci's stock using the Free Cash Flow to Equity (FCFE) model. Naylor believes that Sundanci's FCFF will grow at 27% for 2 years and 13% thereafter. Capital expenditures, depreciation, and working capital are all expected to increase proportionately with FCFE.

(a) Calculate the amount of FCFE per share for the year 2000, using the data from Table given below. (02)

Table: 1 Sundanci Actual 1999 and 2000 Financial Statements for Fiscal Years Ending May 31 ($ million, except per share data).

Income Statement	**1999**	**2000**
Revenue	$ 474	$ 598
Depreciation	20	23
Other operating costs	368	460
Income before taxes	86	115
Taxes	26	35
Net income	60	80
Dividends	18	24
Earnings per share	$0.714	$0.952
Dividend per share	$0.214	$0.286
Common shares outstanding (millions)	84.0	84.0
Balance Sheet	**1999**	**2000**
Current assets	$ 201	$ 326
Net property, plant and equipment	474	489
Total Assets	675	815
Current liabilities	57	141
Long-term debt	0	0
Total liabilities	57	141
Shareholder's equity	618	674
Total liabilities and equity	675	815
Capital expenditures	34	38

Table: 2 Selected Financial Information

Required rate of return on equity	14%
Growth rate of industry	13%
Industry P/E ratio	26

(b) Calculate the current value of a share of Sundanci stock based on the two-stage FCFE model. (06)

5 5.1 (a) What are the basic assumptions on which the science of "Technical Analysis" is built? (02)

(b) Explain with help of illustrative charts, various types of price patterns observed on price charts. (04)

5.2 (a) Explain in brief the various non-direction derivatives strategies and also indicate when they should be used. (04)

(b) Explain by way of an example what is Bull Spread. You may also add a pay off graph. (02)

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