



SOUTH EASTERN UNIVERSITY OF SRI LANKA

Third Year Examination in Bachelor of Business Administration /

Bachelor of Commerce Degree (External) -2009/2010

Held in December, 2010

BBA /COM32, Financial, Investment Analysis & Portfolio Management

Answer **All** questions

Calculator is allowed

Present Value Table is annexed.

Time allowed: **Three Hours**

01. a) The TIC Company currently pays a cash dividend of Rs.5 per share. You believe the dividend will be increased by 4 percent each year indefinitely. How much will the dividend be in eight years?
(02 Marks)
- b) You plan to make a series of deposits in an individual retirement account. You will deposit Rs.10,000 today, Rs.20,000 in two years, and Rs.20,000 in five years. If you withdraw Rs.15,000 in three years and Rs.10,000 in seven years. Assume no withdraw penalties.
- How much will you have after eight years if the interest is 7 percent?
 - What is the present value of these cash flows?
- (05 Marks)
- c) You are looking into an investment that will pay you Rs.100,000 per year for the next 10 years. If you require a 15 percent return, what is most you would pay for this investment?
(03 Marks)
- d) A bond has a 10 percent coupon rate and a Rs.1,000 face value. Interest is paid semiannually, and the bond has 20 years to maturity. If investors require a 12 percent yield, what is the bond's value? What is the effective annual yield on the bond?
(04 Marks)

- e) A debenture carries an 8 percent coupon, paid semiannually. The par value is Rs.1000, and the debenture matures in six years. If the debenture currently sells for Rs.911.37, what is its yield to maturity? What is the effective annual yield?

(05 Marks)

- f) ABC Company has just paid a cash dividend of Rs.2 per share. Investors require a 16 percent return from investments such as this.

- i. If the dividend is expected to grow at a steady 8 percent per year, what is the current value of the stock? What will be the stock be worth in five years?
- ii. What would the stock sell for today if the dividend was expected to 20 percent per year for the next three years and then settle down to 8 percent per year, indefinitely?

(06 Marks)

(Total 25 Marks)

02. a) Why should financial managers choose the capital structure that maximize the value of the firm?

(2 Marks)

- b) What is the relationship between the WACC and the value of the firm?

(3 Marks)

- c) A Company has the following capital structure at 31 March 2010 which is considered as optimum.

14% Debentures	Rs. 300,000
11% Preference	Rs. 100,000
Equity (100,000 shares)	Rs.1,600,000

The company's share has a current market price Rs.23.60 per share. The expected dividend per share next year is Rs.1.18. Growth rate is 10 percent.

The company can issue 16% new debentures. The company's debenture is currently selling at Rs.96. The new preference issue can be sold at a net price of Rs.9.20, paying a dividend of Rs.1.1 per share. The company's tax rate is 35%.

You are required

- i. To calculate the after-tax cost of new debt, cost of new preference share, and cost of equity.
- ii. Find the weighted average cost of capital.
- iii. What is the marginal cost of capital, if the company can sell new ordinary shares at Rs.20 per share? Assume the cost of debt and cost of preference capital is constant.

(15 Marks)

(Total 20 Marks)

03. XYZ Company is considering a proposal of installing a drying equipment. The equipment would involve a cash outlay of Rs.600,000 and working capital of Rs. 80,000. The expected life of the project is 6 years without any salvage value. Assume that the company is allowed to charge depreciation on straight –line basis for tax purposes, and the tax rate is 50 percent. The estimated before-tax cash flows are given below:

Year	Before-tax Cash Flows (Rs.)
1	210,000
2	180,000
3	160,000
4	150,000
5	120,000
6	100,000

If the company's opportunity cost of capital is 12 percent, calculate

- i. The equipment's net present value
- ii. Internal Rate of Return

(Total 15 marks)

04. a) Stock A and B have the following probability distribution of possible future returns:

Probability	Stock A	Stock B
0.1	-15	-20
0.2	0	10
0.4	5	20
0.2	10	30
0.1	25	50

- i. Calculate the expected rate of return for each stock and the standard deviation of returns for each stock.
- ii. Calculate the coefficient of variation
- iii. Which stock is less risky?
- iv. It has been suggested that two securities should be combined into a portfolio in the proportions 40 % security A and 60 % security B. Calculate the expected return for this portfolio and its risk assuming the correlation coefficient to be 0.6.
- v. What are the benefits of combining the two assets into the suggested portfolio?

(16 Marks)

- b) Mart's common stock has a beta coefficient 1.198. Risk-free rate (r_f) is 9.5 percent, and the expected rate of return on the market portfolio of all risky assets (r_m) is 14 percent. Based on the CAPM, what is the expected rate of return?

(4 Marks)

(Total 20 Marks)

05. a) Differentiate the following terms

- i. Capital Asset Pricing Model (CAPM)
- ii. Single-factor model
- iii. Single-index model
- iv. Market model

(4 Marks)

b) The data below describe a three-stock financial market that satisfies the single-index model.

Stock	A	B	C
Capitalization (Rs.)	30,000	19400	13600
Beta	1.0	0.2	1.7
Mean Excess Return (%)	10	2	17
Standard Deviation (%)	40	30	50

The single factor in this economy is perfectly correlated with the value-weighted index of the stock market. The standard deviation of the market index portfolio 25%

- i. What is the mean excess return of the index portfolio?
- ii. What is the covariance between stock A and the index?
- iii. Break down the variance of the stock B into its systematic and firm specific components.

(16 Marks)

(Total 20 Marks)

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