**FOUNDATIONS OF FINANCE**

**MAKE UP QUIZ**

1. Ms. Shruti is 45 years old and plans to retire at 60. Her life expectancy is 80 years. Ms. Suman her Financial Planner, estimates that her client will require Rs.540,000 in the first year after retirement (end of year). Inflation rate is 6% p.a. and the rate of return is 10% p.a. What will be the savings per year required in order to meet this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Money needed at the start of retirement

Here A=540,000 r=10% p.a. g = 6% p.a. n=20

She needs Rs.70,64,276 at the start of retirement.

Step 2

To get this amount in 15 years she needs to save

1. Gaurav received an inheritance of Rs. 20 Lakh. He wants to withdraw equal periodic payments at the beginning of each month for 10 years starting after 10 years. He expects to earn 12% annual interest, compounded monthly on his investments. How much can he withdraw each month? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 1: Amount Gaurav will have after 10 years (120 periods @1% pm)

Step 2 : Amount Gaurav can withdraw monthly for 10 years(120 periods @1%pm) is:

1. A stock’s price currently is Rs.100. An analyst forecast the following for the stock:

* The normalised trailing price earnings (P/E) ratio will be 12x
* The stock is expected to pay Rs.5 dividend this coming year on projected earning of Rs.10 per share.

If the analyst were to buy and hold the stock for the year, the projected return based on these forecasts will be: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

P = EPSx(P/E)= 10x12=120

Return =

1. The following data pertains to a firm’s common stock:

* The stock will pay no dividends for 2 years
* The dividend three years from now is expected to be Re.1.
* Dividends are expected to grow at a 7% rate from that point onward.

If an investor requires 17% return on this investment, how much will the investor be willing to pay for this stock now? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D3 = 1. Hence P2 = Discount Rs.10 for 2 years@17

1. TEN company expects abnormally high returns for the next three years. After 3 years the growth will level off to its normal rate of 6%. Dividends and earnings are expected to grow at 20% for years 1 and 2 and 15% for year 3. The last dividend paid was Rs.1. If an investor requires a 10% return on the company, what is the price that she is willing to pay for the stock \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. A company’s common size financial investments show the following information:

|  |  |
| --- | --- |
| Earnings after taxes | 15% |
| Current liabilities | 20% |
| Equity | 45% |
| Sales | Rs.800 |
| Cash | 10% |
| Total Assets | Rs.2,000 |
| Accounts receivable | 15% |
| Inventory | 20% |

Company’s long-term debt to equity ratio is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Company’s current ratio is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Debt/equity = 0.35x2000/0.45x2000

Current ratio = 45%/20%

1. Weights to be used in calculating a company’s weighted average cost of capital are least appropriately based on:
2. Information from the company about its target capital structure
3. The average capital structure weights for companies of a similar size
4. The average capital structure weights for companies in the same industry.

B

1. The following data pertains to a company’s common size financial statements

|  |  |
| --- | --- |
| Current assets | 40% |
| Total debt | 40% |
| Net income | 16% |
| Total Assets | Rs.2,000 |
| Sales | Rs1,500 |
| Total asset turnover | 0.75 |
| The firm has no preferred stock |  |

What is the company’s return on common equity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ROE = Net Profit/Equity = 16% x1500/(1-0.40)x2000 =20%

1. You are given the following information about a company

|  |  |
| --- | --- |
| Net sales | 4,000 |
| Dividends declared | 170 |
| Cost of goods sold | 2,000 |
| Inventory increased by | 100 |
| Accounts payable increased by | 300 |
| Cash expenses for other inputs | 500 |
| Long term debt principal repayment | 250 |
| Cash tax payments | 200 |
| Purchase of new equipment | 300 |

The company’s cash flow from operations, based on this data only is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4000 -2000 -500 -200-100+300 = 1500

(sales-cogs-cash expenses-cash tax-inventory incr+accts payable)

1. Ritz corporation has a current ratio above 1 and a quick ratio less than 1. Which of the following actions will increase the current ratio and decrease the quick ratio? Ritz corporation
2. Buys fixed assets on credit
3. Uses cash to purchase inventory
4. Pays off accounts payable from cash

C

1. Mt Abu corporation has the following data

Target debt equity ratio for the company is 0.5. Company’s bonds are currently yielding 10%. The company’s constant growth rate is 5%. It just paid a dividend of Rs.3. The company’s share quotes at Rs.31.50 per share. The company’s tax rate is 40%

The company’s weighted after-tax cost of capital is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cost of debt 10%(1-t)=6%

Cost of equity = 3x1.05/31.50 + 5% = 15%

Cost of capital = 6 x 1/3 +15x 2/3 = 12%

1. A successful alumnus of your college decided to set up a scholarship for deserving students of the college. Her plan is for the fund to be capable of awarding Rs.250,000 annually in perpetuity. The first scholarship is to be awarded and paid out exactly four years from today. The funds will be deposited into an account immediately and will grow at a rate of 4% compounded semi-annually, for the foreseeable future. How much money must the investor donate today to fund the scholarship? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Effective rate of interest == 4.04%

Present value of perpetuity at t=3 is 250,000/0.404 = 6,188,118.8

Discount this by 4.04% for three years

1. How will a firm’s operating cash flow be affected by a decrease in accounts receivable and by an increase in accounts payable?
2. Both will increase operating cash flow
3. Both will decrease operating cash flow
4. One will increase operating cash flow and one will decrease operating cash flow

A

1. Plywood Industries reported the following information about the company for the last year

|  |  |
| --- | --- |
| Net Sales | 50,000 |
| Cash expenses | 3,250 |
| Cash inputs | 17,000 |
| Cash taxes | 7,000 |
| Increase in receivables | 500 |
| Depreciation expense | 1,000 |
| Cash flow from investing | -5,000 |
| Cash flow from financing | -4,250 |

If the cash balance increased by Rs.13,000 over the year, what is the cash flow from operations (CFO)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13,000+5,000+4,250

1. Following information is available about a capital budgeting proposal

The proposed project cost is $10,000. The project is expected to increase pre-tax net income by $3,000 in each of the next 8 years. The company has 50% of its capital in equity at a cost of 12%. The pre-tax cost of debt capital is 6%. The company’s tax rate is 33%.

The project’s NPV is closest to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Cost of capital 8%

NPV = 3000x(1-t) x PVIFA (8%,8) – 10,000

|  |
| --- |
|  |
|  |
| 1. 25% |
| 1. Rs.7.31 |
| 1. 36.50 |
| 1. 77.8% ;2.25 |
| 1. B |
| 1. 20% |
| 1. 1500 |
| 1. C |
| 1. 12% |
| 1. 54,94,872 |
| 1. A |
| 1. Rs. 22,250 |
| 1. $ 1550.74 |