

## Model Question (set A) - 2072

### Group A: Brief Answer Questions

Attempt All questions from Group A

(10 x 2 = 20)

1. What are the functions of financial management?
2. Define discount bond and give an example of discount bond.
3. Differentiate annuity from annuity due.
4. State the limitations of payback period.
5. In what situations should a firm consider the use of stock dividend?
6. How does cash conversion cycle affect the size of working capital?
7. Assume that the risk-free rate is 6 percent and the market risk premium is 8 percent. The required rate of return on a stock with a beta of 1.3 is 15.2 percent. Is the underlined statement true or false? Support your answer.

Ans:  $R_r = 16.4\%$ , False

8. Mechi-Mahakali Ltd (MML) is planning to issue preferred stock at a price of Rs 100 a share. The issue is expected to pay a constant annual dividend of As 15 a share. The flotation cost on the issue is estimated to be 6 percent. What is MML's cost of preferred stock?

Ans:  $= 15.96\%$

9. Himlal Trading has EBIT of Rs 80,000, interest expense of Rs 12,000, and preferred dividends of As 16,000. If it pays taxes at the rate of 25 percent, what is its financial BEP?

Ans:  $EBIT_{Fau} = Rs\ 33,333.33$

10. Over the past five years, the dividends of the ABC Company have grown from As 10 per share to the current level of As 20 per share. What was the annual growth rate of the dividend?

Ans:  $g = 14.87\%$

### Group B: Descriptive Answer Questions

Attempt any Five questions from Group B

(5 x 10 = 50)

11. Describe the process of computing weighted average cost of capital. Also describe the uses of WACC by giving suitable examples. (6+4)
12. You are provided the following information of ABC Trading.

Assets	As	Liabilities	Rs
Accounts receivable	4,000	Accounts payable	1,000
Cash in hand	200	Accrued wages	1,000
Cash at bank	800	Deferred taxed	1,500
Inventories	4,000	Long—term debt	5,000
Marketable securities	500	Other accruals	1,000
Net property and plant	12,000	Paid in capital	3,000
		5% Preferred stock	1,000
		Retained earnings	7,000
		Common stock	1,000
	<b>Rs 21,500</b>		<b>Rs 21,500</b>

The company had 20 percent EBIT on annual sales of Rs 200,000 last year. It paid interest at the rate of 10 percent on its debt. The tax rate applicable for the company was 25 percent.

Calculate and interpret:

- a. Current ratio
- b. Quick ratio
- c. Profit margin ratio
- d. Fixed asset turnover ratio
- e. Debt equity ratio.

(5x2)

Ans: a. 2.11x, b. 1.22x, c. 14.81%, d. 16.67 x, e. 87.86%

13. Consider the probability distribution of alternative rates of return associated with Stock P and Stock Q given in the following table.

State of Economy	Probability	Return on Stock P	Return on Stock Q
1	0.1	0.15	-0.10
2	0.3	0.17	0.15
3	0.3	0.08	0.22
4	0.3	-0.02	-0.03

- a. Calculate the expected return and standard deviation of Stock P and Stock Q.
- b. If you form a portfolio of Stock P and Stock Q comprising 80 percent wealth in P and the rest in Q, calculate the return and risk (standard deviation) of your portfolio. (Assume that the correlation between the returns of Stock P and Stock Q is 0.4262)
- c. Which investment would you prefer? (Stock P or Q or the portfolio) (4+4+2)

Ans: a. stock P : 8A%, 7.68%, stock Q: 9.2%, 11.86%, b. 8.56%, 7.47%, c. Portfolio

14. A 12 percent coupon bond with a par value of Rs 1,000 pays interest semiannually. The bond's remaining years to maturity is 8 years but may be called in 4 years at a call price of As 1.080. Assume that the bond is currently selling at Rs 1,150.

- a. What is the bond's current yield?

- b. Calculate the yield to maturity.
- c. Interpret the current yield and yield to maturity calculated above. (5+3 +2)

Ans: a. 10.43%, b. 9.31%

15. National Hydro recently paid a dividend of Rs 20. The company expects to have supernormal growth of 10 percent for 3 years before the dividend is expected to grow at a constant rate of 5 percent. The firm's cost of equity is 15 percent.

- a. What is the stock's horizon or terminal, value?
- b. What is the stock's intrinsic value today?
- c. Explain what happens to the stock value if the cost of equity increases to 17 percent? (3+5+2)

Ans: a. Rs 279.51, b. Rs 238.71

16.(i) Mechi Tea Products procures tea leaves from local tea estates and processes green tea bags which are sold in local market. The average selling price of its finished product (tea bags) is As 850 per kg. The variable cost (mainly the cost of tea leaves) for producing 1 kg tea is As 580. Mechi Tea incurs fixed costs of As 170,000 per year.

- a. What is the break-even point (in kg) for the company?
- b. If the company requires an after tax profit of As 30,000 what is the target unit of sales required? Assume a 25 percent tax rate. (2 + 3)

Ans: a. 629.63 kg, b. 777.78 kg

(ii) How does wealth maximization goal overcome the drawbacks of profit maximization goal? (5)

### Group C: Analytical Answer Questions

Attempt any Two questions from Group C

(2x15=30)

17. Why is the management of working capital important in a business? How do the preparation of cash budget and good credit policy help in the management of working capital? (7+8)

18 Mr. Ram Prasad Baral is 63 years old and recently retired from government services. He wishes to have regular retirement income and is considering an annuity contract with the MetLife Insurance Company. Such a contract pays him an equal rupee amount each year that he lives. For this cash flow stream, he must put up a specific amount of money at the beginning. According to actuary tables, his life expectancy is 15 years, and that is the duration on which the insurance company bases its calculations regardless of how long he actually lives.

- a. If the insurance company uses a compound annual interest rate of 5 percent in its calculations, how much must Mr. Baral pay at the outset for an annuity to provide him with Rs 10,000 per year starting next year?
- b. What would be the purchase price if the compound annual interest rate is 10 percent?
- c. Mr. Baral had As 30,000 to put into an annuity. How much would he receive each year if the insurance company uses a 5 percent compound annual interest rate in its calculation? Assume payments for 15 years only. (6 + 3 + 6)

Ans: a. Rs 103,797. b. Rs 76,061. c. Rs 2,890.26

19. National Corporation is evaluating two mutually exclusive projects: Project A and Project B. cash flows of these projects are			The net
Year	Cash Flows A	Cash Flows B	
0	(Rs 100,000)	(Rs 100,000)	
1	30,000	30,000	
2	30,000	30,000	
3	30,000	40,000	
4	30,000	40,000	
5	30,000	20,000	

The cost of capital of the Corporation is 12 percent.

- a. Calculate payback periods, which project is preferable?
- b. Calculate net present value of both projects. What would be your decision based on net present value?
- c. How would your decisions be affected if the projects are independent?
- d. Calculate profitability index of both projects. (3+6+3+3)

Ans: a. 3.33 years and 3 years; b. Rs 8,144 and Rs 15,943; c. If Independent, both would be accepted; d. 1.0814 and 1.1594]

### Model Question (Set B) - 2072

#### Group A: Brief Answer Questions

Attempt All questions from Group A

(10 x 2 = 20)

1. What the functions of managerial finance?.
2. Define premium bond and give an example of premium bond.
3. Differentiate future value from present value.
4. List three advantages of net present value method over pay back method.
5. What are the motives for holding cash?
6. Define economic order quantity.
7. Interpret credit terms with an example.

8. Assume that the risk-free rate is 6 percent and the market rate of return is 8 percent. The required rate of return on a stock with a beta of 1.3 is 8.6 percent. Is the underlined statement true or false? Support your answer.

Ans: The underlined statement is true because it is 8.6 percent as per the CAPM model as follows: Required return =  $RF [E(Rm) - RF]$   $13.6\% + 18\% - 6\%$   $11.3\%$   $8.6\%$ ;

9. The cost of common stock is always higher than that of debt capital.

10. Mention the career opportunities available for finance graduates. **Group B: Descriptive Answer**

**Questions**

**Attempt any Five questions from Group B**

**(5 x 10 = 50)**

11. Discuss the significance of working capital management in a business firm. (10)

12. Assume that it is now January 1, 2013. On January 1, 2014, you will deposit As 1,000 into a savings account that pays 8 percent.

- a. If the bank compounded interest annually, how much will you have in your account on January 1, 2017?
- b. What would your January 1, 2017. balance be if the bank used quarterly compounding rather than annual compounding?
- c. Suppose you deposit the As 1,000 in 4 payments of As 250 each on January 1 of 2013, 2014, 2015, and 2016. How much would you have in your account on January 1, 2017, based on 8 percent annual compounding?
- d. Suppose you deposit 4 equal installments in your account on January 1 of 2014, 2015, 2016, and 2017. Assuming an 8 percent interest rate. how large would each of your payments have to be for you to obtain the same ending balance as you calculated in part (a)?

**(4x2.5)**

Ans: a. Rs 1,259.71 b Rs 1,268.24; c. Rs 1,216.65 d. 279.56

13. Consider the following balance sheet:

<u>Assets</u>	<u>Amount</u>	<u>Liabilities and Equity</u>	<u>Amount</u>
Cash and Bank	Rs 100,000	Accounts payable	Rs 200,000
Account receivable	300,000	Accrued expenses	80,000
Inventory	550,000	Deferred taxes	
Furniture	50,000	Bond	200,000
Equipment	200,000	Long-term loan	100,000
Plant and machinery	500,000	Common stock	
		(10,000 shares @ X)	1,000,000
		<u>Retained earnings</u>	<u>120,000</u>
<b>Total assets</b>	<b>Rs 1,700,000</b>	<b>Liabilities and equity</b>	<b>Rs 1,700,000</b>

Sales for the year is Rs 5,100,000.

(i) Calculate:

- a. Current Ratio
- b. Quick ratio
- c. Total assets turnover ratio
- d. Debt ratio
- e. Equity multiplier

(ii) What are the limitations of ratio analysis? (7.5+2.5)

Ans: a. 3.39 times; b . 1.43 times; c. 3 times; d. 34.11%; e. 1.52 times

14. Suppose Mechi Tea Company sold an issue of bonds with a 10-year maturity. a As 1,000 par value, a 10 percent coupon rate, and semiannual interest payments.

- a. Two years after the bonds were issued, the going rates of interest on such x-ds fell to 6 percent. At what price would the bonds sell?
- b. Suppose that, 2 years after the initial offering, the going interest rate had risen to 12 percent. At what price would the bonds sell?
- c. Suppose that the conditions in part (a) 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 years. What would happen to the price of the Company's bonds over time? 44.4

Ans: a. Rs 1,251.26; b . Rs 898.9; c. declines to Rs 1000 until maturity

15. (i) The Moonlight Company expect to generate the following net income during the next two years. The Company currently has 100,000 shares outstanding.

<u>Year</u>	<u>1</u>	<u>2</u>
<u>Net income</u>	<u>As 500,000</u>	<u>As 600,000</u>

- a. Determine earning per share in each year.
- b. Determine total dividend and dividend per share if a 40 percent dividend payout ratio is maintained.(2 + 3)

Ans: a. Rs 5 and Rs 6; b. DPS = Ps : and Rs 2.4;

Total dividend = Rs 200,000 ::Rs 240,000

- (ii) Shikhar Industries' stock currently sells for As 400 a share. The stock just paid a dividend of As 20 a share. The dividend, earnings and price are expected to grow at a constant rate of 5 percent a year. What is the required rate of return on the company's stock? What is the required rate of return 1 year from now? (3+2)

Ans and Rs 420	
Mahakali Herbal Company has the following capital structure, which it considers	:
Debt	25%
Preferred stock	15
Common stock	60
Total capital	100%

The company's tax rate is 40 percent, and investors expected earnings and dividends to grow at a constant rate of 9 percent in the future. The company's current dividend is Rs 36 per share. Its common stock currently sells at a price of Rs 600 per share. These terms would apply to new security offerings:

*Common:* New common stock would have a flotation cost of 10 percent.

*Preferred:* New preferred stock could be sold to the public at a price of Rs 100 per share, with a dividend of Rs 11, flotation costs of Rs 5 per share would be incurred.

*Debt:* Debt could be sold at an annual interest rate of 12 percent.

- Find the component cost of debt, preferred stock, retained earnings, and new common stock.
- Calculate the weighted average cost of capital assuming that common stock financing requirements are all met by retained earnings.

(6+4)  
Ans: a.  $k_{dT} = 7.2\%$ ;  $k_p = 11.58\%$ ;  $k_r = 15.54\%$ ;  $k_c = 16.27\%$ , b. 12.86%

### Group C: Analytical Answer Questions

**Attempt any Two questions from Group C**

**(2 x 15 = 30)**

17. What is optimal capital structure? Demonstrate graphically the relationship between cost of capital and capital structure. Also explain with suitable example the implications of financial leverage on return on equity. (4 + 4 + 7)

18. Consider the probability distribution of alternative rates of return associated with Stock A and Stock B given in following table.

State of economy	Probability	Stock A	Stock B
1	0.3	10%	30%
2	0.4	15	20
3	0.3	20	20

- Calculate the expected return and standard deviation of Stock A and Stock B.
- What are the covariance and correlation coefficient between Stock A and Stock B?
- Would you think that forming a portfolio of these two stocks reduces the risk? Why or Why not? Explain.
- If you form a portfolio of Stock A and Stock B comprising 60 percent wealth in Stock A and the rest in Stock B, calculate the risk and return of your portfolio. Which investment would you prefer? Stock A or Stock B or the portfolio? Why?

(5+3+3+4)  
Ans: a.  $E(R) = 15\%$  and  $23\%$  and  $S.D. = 3.87\%$  and  $4.58\%$ , b.  $-15$  and  $-0.8463$ , c. Yes because correlation is highly negative; d.  $18.2\%$  and  $1.25\%$ , We would choose the portfolio because it reduces the risk significantly and the risk per unit of return is the lowest

19. Star Trading Ltd. is evaluating two mutually exclusive projects: Project A and Project B. The company will require Rs 75,000 for Project A and Rs 100,000 for Project B. The net cash flows of these projects are as follows:

Year	Cash Flows	
	A —Rs 75,000	B —Rs 100,000
	Profit after taxes	
1	Rs 2500	Rs 40,000
2	25.00	30.000
3	25.00	20.000
4	25.00	30.000
5	25.00	60.000

Cost of capital of the company

- Calculate the payback period of each project. Assume that the firm has set three years as a maximum payback period to select a project. Suggest as to which project is preferred.
- Evaluate the projects on the basis of their net present value.
- Calculate the internal rate of both projects. Which one would you choose?
- Is there any conflict in the results given by the above ranking methods? Which decision criterion would you prefer if they conflict? Why?

(4+4+4+3)  
Ans: a. 1.875 years and 1.8 years; b. Rs 69,192 and Rs 99,073; c. 45.02% and 46.36%; d. No. NPV is used if they conflict because NPV has valid reinvestment rate assumption, it recognizes value additivity principle and it does not give multiple results as opposed to IRR when cash flows are non-normal