International Islamic University Chittagong
Department of Business Administration
MBA Final Examination
Spring -2022

Managerial Finance (FIN-5301)

Time: 3 Hours Marks: 40

Answer any **four** of the following questions

1. a. Good Apparel reported earnings available to common stock of $4,000,000 last year. From those earnings, the company paid a dividend of $1.20 on each of its 1,000,000 common shares outstanding. The capital structure of the company includes 30% debt, 20% preferred stock, and 50% common stock. It is taxed at a rate of 35%. 7

   a) If the market price of the common stock is $40 and dividends are expected to grow at a rate of 6% per year for the foreseeable future, what is the company's *cost of retained earnings* financing?
   b) If underpricing and flotation costs on new shares of common stock amount to $6.00 per share, what is the company's *cost of new common stock* financing?
   c) The company can issue $2.00 dividend preferred stock for a market price of $25.00 per share. Flotation costs would amount to $3.00 per share. What is the *cost of preferred stock* financing?
   d) The company can issue $1,000-par-value, 10% coupon, 5-year bonds that can be sold for $1,200 each. Flotation costs would amount to $25.00 per bond. Use the estimation formula to figure the approximate *cost of debt* financing.
   e) What is the *WACC*?

   b. What role does the cost of capital play in the firm's long-term investment decisions? How does it relate to the firm's ability to maximize shareholder wealth? 3

2. a. Assume a $50,000 initial investment and the following cash flows for two mutually exclusive alternatives. 7

Year	Investment X	Investment Y
1	$ 7,000	$20,000
2	10,000	20,000
3	15,000	15,000
4	17,000	10,000
5	29,000	—

   i. Which of the alternatives would you select under the payback method?
   ii. Which alternative will be selected using NPV, if cost of capital is 12%?
   iii. Calculate IRR of both alternatives.
   iv. Is there any conflict between NPV and IRR? Why?

   b. Do the net present value (NPV) and internal rate of return (IRR) always agree with respect to accept–reject decisions? With respect to ranking decisions? Explain. 3

3. a. Carolina Company has sales of 100,000 units at $2.20 per unit, variable operating costs of $1.75 per unit, and fixed operating costs of $6,000. Interest is $8,000 per year. Dallas Company has sales of 100,000 units at $2.50 per unit, variable operating costs of $1.00 per unit, and fixed operating costs of $62,500. Interest is $17,500 per year. Assume that both firms are in the 40% tax bracket. 7

   i. Compute the degree of operating, financial, and total leverage for Carolina Company. Discuss the answers.
   ii. Compute the degree of operating, financial, and total leverage for Dallas Company. Discuss the answers.
   iii. Compare the relative risks of the two firms.

b. What is meant by the term *leverage?* How are operating leverage, financialleverage, and total leverage related to the income statement? 3

4. a. Better Manufacturing turns over its inventory seven times each year, has an average payment period of 40 days, and has an average collection period of 60 days. The firm's annual sales are $3.5 million. Assume there is no difference in the investment per dollar of sales in inventory, receivables, and payables and that there is a 365-day year. 6
   I. Calculate the firm's *operating cycle* and *cash conversion cycle*.
   II. Calculate the firm's daily cash operating expenditure. How much in resources must be invested to support its cash conversion cycle?
   III. If the firm pays 14% for these resources, by how much would it increase its annual profits by reducing average collection period 15 days?

   b. The Best Corporation purchases 1,500,000 units per year of one component. The fixed cost per order is $50. The annual carrying cost of the item is 22% of its $3 cost. Determine the EOQ. What do your answers illustrate about the EOQ model? Explain. 4

5. a. Dexter Company has compiled the information shown in the following table. 5

Source of capital	Book value	Market value	After tax cost
Long term debt	$3,000,000	$2,800,000	5.6%
Preferred stock	500,000	700,000	9
Common equity	2,500,000	3,800,000	12.5
Total	6,000,000	7,300,000	

   I. Calculate the weighted average cost of capital using *book value weights.*
   II. Calculate the weighted average cost of capital using *market value weights.*
   III. Compare the answers obtained in parts (I)and (II). Explain the differences.

   b. Likert Tech uses the *internal rate of return (IRR)* to select projects. Calculatethe IRR for each of the following projects and recommend the best project based onthis measure. Project T-Shirt requires an initial investment of $25,000 and generatescash inflows of $8,000 per year for 4 years. Project Board Shorts requires an initialinvestment of $42,000 and produces cash inflows of $12,000 per year for 5 years. 5
   Which project should be selected if they are mutually exclusive?

6. a. TOR most recently sold 120,000 units at$7.00 each; its variable operating costs are $3.00 per unit, and its fixed operating costsare $220,000. Annual interest charges total $80,000, and the firm has 8,000 shares of$5 (annual dividend) preferred stock outstanding. It currently has 20,000 shares ofcommon stock outstanding. Assume that the firm is subject to a 40% tax rate. 5
   I. At what level of sales (in units) would the firm break even on operations?
   II. Calculate the firm's *earnings per share (EPS)* in tabular form at (1) the current level of sales and (2) a 140,000-unit sales level.

   b. Define and discuss the following terms: 3
   EOQ, reorder point, and safety stock,

   c. Differentiate between afirm's operating cycle and its cash conversion cycle. 2