(10)

BBA in TM, 7th Sem. Date: December 22, 2023 (Afternoon)

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)

DEPARTMENT OF BUSINESS AND TECHNOLOGY MANAGEMENT

Semester Final Examination — Winter Semester, A. Y. 2022-2023
Course No. : BTM 4721 — Time : 3 hours
Course Title : Corporate Finance — Full Marks : 150

Answer **all 6 (six)** questions. All questions carry equal marks. Marks of each question and corresponding CO and PO are written in the right margin with brackets.

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1. a) Differentiate between trend analysis and comparative ratio analysis. Why is it useful to do a comparative ratio analysis? List several potential problems with ratio analysis. 10 (CO1) (PO1)

   b) Explain how the extended, or modified, Du Pont equation can be used to reveal the basic determinants of ROE. What is the equity multiplier? Donaldson & Son has an ROA of 10%, a 2% profit margin, and a return on equity equal to 15%. What is the company's total assets turnover? What is the firm's equity multiplier? 10 (CO3) (PO3)

   c) The Manor Corporation has \$500,000 of debt outstanding, and it pays an interest rate of 10% annually: Manor's annual sales are \$2 million, its average tax rate is 30%, and its net profit margin on sales is 5%. If the company does not maintain a TIE ratio of at least 5 times, its bank will refuse to renew the loan, and bankruptcy will result. What is Manor's TIE ratio? 05 (CO3) (PO3)

2. a) Which is a better measure of risk if assets have different expected returns: (i) the standard deviation or (ii) the coefficient of variation? Why? And explain the following statement: "Most investors are risk averse." How does risk aversion affect rates of return? 10 (CO2) (PO2)

   b) An individual has \$35,000 invested in a stock which has a beta of 0.8 and \$40,000 invested in a stock with a beta of 1.4. If these are the only two investments in her portfolio, what is her portfolio's beta? 05 (CO3) (PO3)

   c) Assume that the risk-free rate is 6% and the expected return on the market is 13%. What is the required rate of return on a stock that has a beta of 0.7? 05 (CO3) (PO3)

   d) Security A has an expected return of 7%, a standard deviation of returns of 35%, a correlation coefficient with the market of - 0.3, and a beta coefficient of -1.5. Security B has an expected return of 12%, a standard deviation of returns of 10%, a correlation with the market of 0.7, and a beta coefficient of 1.0. Which security is riskier? Why? 05 (CO3) (PO3)

3. a) What is the efficient frontier? Conceptually, how does an investor choose his or her optimal portfolio? What is the difference between the CML and the SML? 10 (CO2) (PO2)

   b) Explain the following statement: "An asset held as part of a portfolio is generally less risky than the same asset held in isolation." 05 (CO2) (PO2)

c) In general, can the risk of a portfolio be reduced to zero by increasing the number of stocks in the portfolio? Explain. What is the beta of a stock that is as risky as the market? Why is beta the theoretically correct measure of a stock's risk? 10 (CO2) (PO2)

4. a) Should preferred stock be considered as equity or debt? Explain. Who are the major purchasers of nonconvertible preferred stock? Why? Briefly explain the mechanics of adjustable rate and market auction preferred stock. What are the advantages and disadvantages of preferred stock to the issuer? 10 (CO2) (PO2)

b) What is a warrant? How are warrants used in corporate financing? What is a conversion ratio? What are the advantages and disadvantages of convertibles to issuers? To investors? 7.5 (CO1) (PO1)

c) What are the three possible methods for reporting EPS when warrants and convertibles are outstanding? Which methods are most used in practice? Why should investors be concerned about a firm's outstanding warrants and convertibles? 7.5 (CO2) (PO2)

5. a) What is the difference between an operating lease and a financial, or capital, lease? Does leasing lead to increased credit availability? 7.5 (CO2) (PO2)

b) Why is lease financing sometimes referred to as off–balance sheet financing? Explain sale and leaseback, combination lease and synthetic lease. 10 (CO2) (PO2)

c) What are the four economic types of mergers? 7.5 (CO1) (PO2)

6. a) Define synergy. Is synergy a valid rationale for mergers? Describe several situations that might produce synergistic gains. 7.5 (CO1) (PO1)

b) Why is the adjusted present value approach appropriate for situations with a changing capital structure? What is break-up value concept in merger? Suppose your firm could purchase another firm for only half of its replacement value. Would that be a sufficient justification for the acquisition? 7.5 (CO2) (PO2)

c) Green Mountain Breweries is considering an acquisition of Ritta Markets. Ritta currently has a cost of equity of 10%; 25% of its financing is in the form of 6% debt, the rest in common equity. Its federal-plus-state tax rate is 40%. After the acquisition Green Mountain expects Ritta to have the following FCFs and interest payments for the next 3 years (in millions): 10 (CO3) (PO3)

	Year 1	Year 2	Year 3
FCF	\$10.00	\$20.00	\$25.00
Interest expense	28.00	24.00	20.28

After this, the free cash flows are expected to grow at a constant rate of 5%. If Ritta's unlevered cost of equity is 9%. Calculate Ritta's value of operations to Green Mountain by using the adjusted present value approach.