

COURSE CODE (CREDITS): 24BB1HS413 (4)

MAX. MARKS: 35

COURSE NAME: FINANCIAL MANAGEMENT

COURSE INSTRUCTORS: ASA, TGM

MAX. TIME: 2 Hours

*Note: (a) All questions are compulsory.**(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

Q.No	Question	CO	Marks
Q1	<p>Alpha Components Ltd., a mid-sized firm specializing in automobile parts, is evaluating a strategic investment in a project. The proposed project requires an initial capital outlay of ₹3.2 crore, which includes ₹2.5 crore for the machinery, ₹40 lakh in installation and training expenses, and ₹30 lakh in additional expenses.</p> <p>The equipment is expected to last for 6 years. The project is expected to generate volatile net cash inflows before tax and depreciation over its 6-year life: ₹60 lakh in year 1, ₹80 lakh in year 2, ₹95 lakh in year 3, ₹85 lakh in year 4, ₹75 lakh in year 5, and ₹65 lakh in year 6. Operating costs (excluding depreciation) are projected to increase annually at 5% from a base of ₹20 lakh in year 1.</p> <p>The corporate tax rate is 30%, and the company's weighted average cost of capital is 14%.</p> <p>You are required to decide that, based on NPV and IRR, whether the project should be undertaken.</p>	5	8
Q2	<p>Delta Robotics Pvt. Ltd., a high-growth automation firm, is considering investing ₹1.8 crore in a proprietary robotic assembly line. The project has a lifespan of 7 years. The firm anticipates the following net cash flows over the years: ₹20 lakh in Year 1, ₹30 lakh in Year 2, ₹40 lakh in Year 3, ₹50 lakh in Year 4, ₹60 lakh in Year 5, ₹70 lakh in Year 6, and ₹80 lakh in Year 7. However, due to sector volatility, the company's CFO insists on evaluating not just the traditional Payback Period but also the Discounted Payback Period using the firm's cost of capital, which is 12% per annum. The firm's board has a strict investment policy: no project will be considered unless it recovers its investment within 5 years on a discounted basis.</p> <p>As the financial analyst, you are required to:</p> <p>Compute the traditional Payback Period, Discounted Pay Back Period and determine when the initial investment is fully recovered.</p>	4	6
Q3	<p>Phoenix Textiles Ltd., a publicly listed manufacturing firm, is evaluating its capital structure to optimize its cost of capital before undertaking a ₹100 crore expansion project. The company is currently</p>	5	8

	<p>financed with ₹60 crore in equity, ₹25 crore in long-term debt, and ₹15 crore in preferred shares. The equity shares are currently trading at ₹300 per share with a beta of 1.2. The firm expects a dividend of ₹18 per share next year, and analysts forecast a long-term dividend growth rate of 6% annually. The long-term debt carries a coupon rate of 9%, but due to changes in interest rates, it is currently trading at 92% of face value, with 8 years remaining to maturity and annual coupon payments. The preferred shares have a face value of ₹100, pay an annual dividend of ₹12, and are trading at ₹96 per share. The corporate tax rate is 30%, and the risk-free rate is 6%, with the market risk premium estimated at 7%.</p> <p>You are required to calculate Weighted Average Cost of Capital.</p>		
Q4	<p>Sparkle Electronics, a small consumer appliance company, manufactures portable fans. The company currently sells 10,000 units annually at ₹500 per unit. The variable cost per unit is ₹300, and the total fixed operating costs amount to ₹12,00,000 per year. The firm has ₹20,00,000 of debt on which it pays an annual interest of ₹2,00,000.</p> <p>As a finance student, you are required to:</p> <ol style="list-style-type: none"> Calculate the company's degree of operating leverage (DOL) at the current sales level. Calculate the degree of financial leverage (DFL). Determine the degree of total leverage (DTL). Interpret the results and briefly explain what the DOL, DFL, and DTL indicate about the company's business and financial risk. 	3	1.5x4 = 6
Q5	<p>Explain the relationship between risk and return in financial management. Why is understanding this trade-off important for investors when making investment decisions? Provide a brief example to support your explanation.</p>	2	4
Q6	<p>Discuss how comparative and historical financial analysis can be used together to evaluate a firm's financial health over time and relative to its peers. What are the limitations of relying solely on one type of analysis? Illustrate your answer with an example involving key financial ratios.</p>	1	3