CMA JUNE, 2019 EXAMINATION
PROFESSIONAL LEVEL-IV
SUBJECT: 401. FINANCIAL MANAGEMENT

Time: Three hours | Full Marks: 100

- All questions are to be attempted.
- Show computations, where necessary.
- Answer must be brief, relevant, neat and clean.
- Start answering each question from a fresh sheet.

Q. No. 1

(a) What are the major decisions taken by the financial manager? What are the factors you should consider in making each decision?

(b) Calculate the target cash balance using the BAT model: Annual interest rate 12%; Fixed order cost Tk.100; Total cash needed Tk.240,000. What are the opportunity cost of holding cash, the trading cost, and the total cost? What would these be if 15,000 were held instead?

(c) Profit maximization is superior to the wealth maximization. Do you agree? Why or Why not? Discuss. What are the potential problems and limitations of financial ratio analysis? Discuss.

(d) Suppose the BDJ Corporation has decided in favor of a capital restructuring that involves increasing its existing Tk.80 million in debt to Tk.125 million. The interest rate on the debt is 9 percent and is not expected to change. The firm currently has 10 million shares outstanding, and the price per share is Tk.45. If the restructuring is expected to increase the ROE, what is the minimum level for EBIT that BDJ's management must be expecting? Ignore taxes in your answer.

(e) Consider the following financial statement information for the ABC Company:

Item	Beginning		Ending
Inventory	1,273		1,401
Accounts receivable	3,782		3,368
Accounts payable	1,795		2,025
Net sales		14,750	
Cost of goods sold		11,375	

Required: Calculate the operating and cash cycles.

[Marks: (4+4+5+3+4) = 20]

Q. No. 2

(a) Explain the assumptions of net operating income approach (NOI) theory of capital structure.

(b) A project under consideration costs Tk.750,000, has a five year life, and has no salvage value. Depreciation is straight line to zero. The required return is 17 percent, and the tax rate is 34 percent. Sales are projected at 500 units per year. Price per unit is Tk.2,500, variable cost per unit is Tk.1,500, and fixed costs are Tk.200,000 per year. Suppose you think that the unit sales, price, variable cost, and fixed cost projections given here are accurate to within 5 percent. What are the upper and lower bounds for these projections? What is the base case NPV? What are the best and worst case scenario NPVs?

(c) G Company expects an EBIT of Tk.10,000 every year forever. G can borrow at 7 percent. Suppose G currently has no debt, and its cost of equity is 17 percent. If the corporate tax rate is 35 percent, what is the value of the firm? What will the value be if G borrows Tk.15,000 and uses the proceeds to repurchase stock? [Use the M&M Proposition I with corporate taxes]

(d) Suppose stock in W Corporation has a beta of 0.80. The market risk premium is 6 percent, and the risk-free rate is 6 percent. W's last dividend was Tk.1.20 per share, and the dividend is expected to grow at 8 percent indefinitely. The stock currently sells for Tk.45 per share.

Q. No. 2(cont'd...)

Required:

(i) What is W's cost of equity capital?

(ii) In addition to the information given in the above problem, suppose W has a target debt–equity ratio of 50 percent. Its cost of debt is 9 percent before taxes. If the tax rate is 35 percent, what is the WACC?

(iii) Suppose in the above problem W is seeking Tk.30 million for a new project. The necessary funds will have to be raised externally. W's flotation costs for selling debt and equity are 2 percent and 16 percent, respectively. If flotation costs are considered, what is the true cost of the new project?

[Marks: (4+6+4+6) = 20]

Q. No. 3

(a) There has been considerable momentum to reduce or remove trade barriers in an effort to achieve "free trade." Yet, one disgruntled executive of an exporting firm stated, "Free trade is no conceivable; we are always at the mercy of the exchange rate. Any country can use this mechanism to impose trade barriers." What does this statement mean?

(b) Zheng Sen's Pen Company has an outstanding issue of convertible bonds with a Tk. 1,000 par value. These bonds are convertible into 50 shares of common stock. They have a 10 percent coupon and a 10-year maturity. The interest rate on a straight bond of similar risk is 8 percent.

(i) Calculate the straight bond value of the bond.

(ii) Calculate the conversion value of the bond when the market price of the stock is Tk.30 per share.

(iii) What is least you would expect the bond to sell for a market price of common stock of Tk. 18 per share?

(c) The L5 Corporation is considering an equity issue to finance a new space station. A total of Tk.15 million in new equity is needed. If the direct costs are estimated at 7 percent of the amount raised, how large does the issue need to be? What is the dollar amount of the flotation cost?

(d) Jones Design wishes to estimate the value of its outstanding preferred stock. The preferred issue has an Tk.80 par value and pays an annual dividend of Tk.6.40 per share. Similar-risk preferred stocks are currently earning a 9.3% annual rate of return.

Required:

(i) What is the market value of the outstanding preferred stock?

(ii) If an investor purchases the preferred stock at the value calculated in part (i**),** how much does she gain or lose per share if she sells the stock when the required return on similar-risk preferred stocks has risen to 10.5%? Explain.

(e) Home Place Hotels, Inc., is entering into a 3-year remodeling and expansion project. The construction will have a limiting effect on earnings during that time, but when it is complete, it should allow the company to enjoy much improved growth in earnings and dividends. Last year, the company paid a dividend of Tk.3.40. It expects zero growth in the next year. In years 2 and 3, 5% growth is expected, and in year 4, 15% growth. In year 5 and thereafter, growth should be a constant 10% per year. What is the maximum price per share that an investor who requires a return of 14% should pay for Home Place Hotels common stock?

[Marks: (3+3+3+5+6) = 20]

Q. No. 4

(a) Why might a low payout desirable? Explain.

(b) ALOMA Corp. a U.S. firm has a French Subsidiary that produces paper and exports to various European countries. All the countries are where it sells its papers use the euro as their currency which is the same as the currency used in France. Is ALOMA Corp. exposed to exchange rate risk?

(c) Acquiring firm stockholders seem to benefit little from takeovers. Why is this finding a puzzle? What are some of the reasons offered for it?

(d) Jamie Peters invested Tk.100,000 to set up the following portfolio one year ago:

Asset	Cost	Asset Beta	Yearly Income	Value Today
A	20,000	0.80	1600	20,000
B	35,000	0.95	1400	36,000
C	30,000	1.50	-	34,500
D	15,000	1.25	375	16,500

Required:

(i) Calculate the portfolio beta on the basis of the original cost figures.

(ii) Calculate the percentage return of each asset in the portfolio for the year.

(iii) Calculate the percentage return of the portfolio on the basis of original cost, using income and gains during the year.

(iv) At the time Jamie made his investments, investors were estimating that the market return for the coming year would be 10%. The estimate of the risk-free rate of return averaged 4% for the coming year. Calculate an expected rate of return for each stock on the basis of its beta and the expectations of market and risk-free returns.

(e) Regressing returns for Stock A against returns for the market portfolio yielded the following results: Stock A's alpha is 2%, Stock A's beta is 2, and the standard deviation of Stock A's returns is 40%. The standard deviation of the market's returns is 10%.

(i) Where does Stock A's characteristic line intercept the vertical axis?

(ii) What is the slope of Stock A's characteristic line?

(iii) What is the systematic risk of Stock A?

(iv) What is the unique risk of Stock A?

[Marks: (2+3+3+8+4) = 20]

Q. No. 5

At 5:30 on Friday afternoon, January 22, 2016, Bill Hall, the chairman and CEO of National Brands, Inc., was clearing up the last of the papers on his desk and looking forward to a relaxing weekend. It had been a good week. The company's annual results were in, and they showed that 2015 had been the best year in the company's history. Sales and net income were up over 8 percent from last year, and there was over $1.1 billion dollars in the cash and equivalents account to invest in the coming year.

The phone rang. It was Maria Ortiz, his secretary. "Did you hear the latest on the newswire?" Maria asked.

"No, what's up?" Bill replied, with a suspicious feeling that his evening wasn't going to be so relaxing after all.

"Kelly O'Brien, head of A-1 Holdings, just announced that he's bought 5 percent of our outstanding shares, and now he's making a tender offer for all the rest at $55."

Q. No. 5(cont'd...)

"I knew it!" Bill spat out. "He was in here just a few weeks ago, talking about whether we would sell the company to him. We turned down his offer because we want to stay independent, and he left after implying we weren't looking out for our stockholders. He's got some plan to restructure the company around a six-member board of directors instead of the 15 we have now. Now he's trying to do it anyway, whether we like it or not!"

"Looks like it," Maria agreed, "so what do you think we should do?" "OK, get a hold of Tom Straw, the chief operating officer, and Doris Faraday in finance, and tell them to get up here for a meeting right away," Bill directed. "Oh, and have Stan Lindner from public relations come, too; we're sure to have a press release about this, and—oh, wait—call my wife, too, and tell her I won't be home until late tonight."

After about half an hour, those that Bill had called began arriving, armed with pencils, papers, and calculators in anticipation of the coming session. Bill, in the meantime, had managed to compile some financial data about A-1 Holdings, which he had summarized on a sheet of paper along with comparable data on his own company, National Brands, (see Figure 1). He passed the sheet around among the others.

"OK, let's start with what we know," Bill led off. "A-1 already has 5 percent of our outstanding shares, and is making a bid for the rest at $55, or 7 1/8 over market."

"I hate to be the devil's advocate," Stan said, thinking of the 1,000 shares he owned personally, "but that sounds like a pretty fair offer. What will happen if he succeeds?"Most of us will be out of a job, and this company will become just another card in Kelly O'Brien's poker hand," Bill said acidly. "Our employees deserve better than that, so let's talk about what we can do to keep it from happening."

"What about a poison pill?" Tom suggested. "We could take out a fair-sized loan based on our heavy cash position, and A-1 would have a tough time absorbing it—just look at the amount of debt they're carrying now!"

Figure 1

Selected Financial Data	**National Brands**	**A-1 Holdings**
Total earnings expected in the coming year	$ 400,000,000	$ 152,000,000
Number of shares outstanding	113,640,000	61,800,000
Earnings per share	$ 3.52	$2.46
Price–earnings ratio	13.6	5.3
Market price	$ 47.88	$ 13.00(rounded)
Book value per share	$ 26.84	$ 6.39
Growth rate before merger	8.53%	19.61%
Liquid assets (cash and equivalent)	$1,153,000,000	$1,736,800,00
Total assets	$5,160,300,000	$2,294,500,000
Total debt	$2,110,300,000	$1,899,500,000
Total equity	$3,050,000,000	$ 395,000,000
Dividend payout ratio	48.0%	0%

"That would probably work, but it's not very good for us, either," Stan agreed. He was still thinking about the seven dollars a share profit to be made in a buyout. "So, how about someone else? You know, a white knight who would top A-1's offer but would keep the structure of the company substantially the same as it is now."

"I don't know who we could ask," Bill said, "and besides that, the basic problem would probably still occur—we would lose our status as an independent entity."

Q. No. 5(cont'd...)

Doris had been working on some figures on her pad, and she spoke up now. "There's another alternative," she said, "that I'm surprised you all haven't mentioned, given the financial status of the two companies."

"What, what !" Bill said. "Don't keep us in suspense!"

"It's the Pac Man defense," she continued, unruffled. "What we do is launch a tender offer of our own for all of A-1's outstanding stock. If it's successful, we not only thwart the takeover attempt but we gain a new business in the bargain."

"Didn't Martin Marietta try that with Bendix back in 2002?" Bill asked. As I recall, it didn't turn out very well for them."

"You're right, it didn't," Doris agreed, "and no one else has tried it since. But, just comparing numbers here between National and A-1, I think it might work out quite well for us. I've been doing some calculating here, and I think an offer to A-1's shareholders of $17 a share would be accepted, and we could conclude the whole affair rather quickly."

"I'm interested," Bill said. "Tell you what, put your finance staff on it over the weekend and have them work up the proposal formally. Get the legal and accounting people to help you, too. In the meantime, Stan, tip off the news media that we will have an announcement of our own shortly and draft up a public notice for A-1's shares at $17 each. Don't release it yet, but be ready to on Monday. Oh, and be sure to include in it that I said the deal will not cause any dilution of National's earnings per share. One last thing. Doris, draft an open letter to our shareholders for my signature, explaining what's happening and reassuring them that we will keep their company intact and prosperous.

"Any questions? If not, let's get on it—Mr. O'Brien is about to get a surprise!"

(a) A-1 is offering $55 a share for National's stock. How much total cash will it have to raise to buy the company? (The remaining 95 percent?)

(b) Assume A-1 plans to borrow the money needed to make the purchase. If A-1 uses the amount of liquid assets presently on hand at National to offset the amount it needs to borrow, what is the net amount it will have to borrow?

(c) Assuming A-1 does borrow the amount you determined in *b* above, what will A-1's total debt be after the purchase is completed? In making your calculation, consider all forms of debt that the combined firm will have. Now compute A-1's debt-to-equity ratio (A-1's equity will not increase). Given this ratio, do you think it is likely that A-1 will be able to obtain the necessary debt financing?

(d) Suppose instead that A-1 decides to issue stock to raise the money needed for the purchase (i.e., the amount you computed in *b* above will be raised through a stock issue instead of by borrowing). How many shares of A-1 stock will have to be issued? (Assume the price at which it will be issued is $13 and disregard flotation costs.)

(e) If A-1 does raise the money by issuing new shares of its stock, what will A-1's EPS be after the purchase is complete and earnings are combined?

(f) Do you think A-1's shareholders will be happy if this deal goes through? What about the old National shareholders?

[Marks: (3+3+4+3+3+4) = 20]

= THE END =