Actuarial Society of India

EXAMINATIONS

07th November 2006

Subject CT2 – Finance and Financial Reporting

Time allowed: Three Hours (10.30 – 13.30 pm)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. **Do not write your name anywhere on the answer scripts. You have only to write your Candidate's Number on each answer script.**
2. **Mark allocations are shown in brackets.**
3. **Attempt all questions, beginning your answer to each question on a separate sheet. However, answers to objective type questions could be written on the same sheet.**
4. **Fasten your answer sheets together in numerical order of questions. This, you may complete immediately after expiry of the examination time.**
5. **In addition to this paper you should have available graph paper, Actuarial Tables and an electronic calculator.**

Professional Conduct:

"It is brought to your notice that in accordance with provisions contained in the Professional Conduct Standards, If any candidate is found copying or involved in any other form of malpractice, during or in connection with the examination, Disciplinary action will be taken against the candidate which may include expulsion or suspension from the membership of ASI."

Candidates are advised that a reasonable standard of handwriting legibility is expected by the examiners and that candidates may be penalized if undue effort is required by the examiners to interpret scripts.

AT THE END OF THE EXAMINATION
Hand in both your answer scripts and this question paper to the supervisor.

Q.1 Select the most appropriate statement

A A hostile takeover is the main method of transferring ownership interest in a corporation.

B The corporation is a legal entity created by the state and is a direct extension of the legal status of its owners and managers, that is, the owners and managers are the corporation

C Unlimited liability and limited life are two key advantages of the corporate form over other forms of business organization

D In part due to limited liability and ease of ownership transfer, corporations have less trouble raising money in financial markets than other organizational forms.

E None of the above **[2]**

Q.2 Select the most appropriate statement

A One of the ways in which firms can mitigate or reduce agency problems between bondholders and stockholders is by increasing the amount of debt in the capital structure.

B The threat of takeover is one way in which the agency problem between stockholders and managers can be alleviated.

C Managerial compensation can be structured to reduce agency problems between stockholders and managers.

D Both statements b and c are correct.

E All of the statements above are correct **[2]**

Q.3 Select the most appropriate statement

A The proper goal of the financial manager should be to maximize the firm's expected cash flow, because this will add the most wealth to each of the individual shareholders (owners) of the firm

B One way to state the decision framework most useful for carrying out the firm's objective is as follows: "The financial manager should seek that combination of assets, liabilities, and capital which will generate the largest expected projected after-tax income over the relevant time horizon."

C Since large, publicly-owned firms are controlled by their management teams, and typically, ownership is widely dispersed, managers have great freedom in managing the firm. Managers may operate in stockholders' best interests, but they may also operate in their own personal best interests. As long as managers stay within the law, there simply aren't any effective controls over managerial decisions in such situations.

D All of the above statements are correct

E None of the above are correct **[2]**

Q.4 Select the most appropriate statement

A Since stockholders do not generally pay corporate taxes, corporations should focus on before-tax cash flows when calculating the weighted average cost of capital (WACC).

B When calculating the weighted average cost of capital, firms should include the cost of accounts payable

C When calculating the weighted average cost of capital, firms should rely on historical costs rather than marginal costs of capital

D Answers A and B are correct.

E None of the above is correct. **[2]**

Q.5 Limited liability refers to the fact that

A the creditors of a corporation can look only to the assets of the corporation to satisfy their claims

B the creditors of a corporation can look only to the assets of the shareholders to satisfy their claims.

C the creditors of the shareholders can look only to their stock in the corporation to satisfy their claims.

D the creditors of the shareholders cannot look to their stock in the corporation to satisfy their claims.

E None of the above. **[2]**

Q.6 Project A has an internal rate of return of 18 percent, while Project B has an internal rate of return of 16 percent. However, if the company's cost of capital (WACC) is 12 percent, Project B has a higher net present value. Which of the following statements is most correct?

A The crossover rate for the two projects is less than 12 percent.

B Assuming the timing of the two projects is the same, Project A is probably of larger scale than Project B.

C Assuming that the two projects have the same scale, Project A probably has a faster payback than Project B.

D Answers A and B are correct.

E Answers B and C are correct **[2]**

Q.7 Which of the following statements is most correct?

A An option's value is determined by its exercise value, which is the market price of the stock less its striking price. Thus, an option can't sell for more than its exercise value.

B As stock price rises, the premium portion of an option on a stock increases because the difference between the price of the stock and the fixed striking price increases

C Issuing options provides companies with a low cost method of raising capital.

D The market value of an option depends in part on the option's time to maturity and on the variability of the underlying stock's price.

E The potential loss on an option decreases as the option sells at higher and higher prices because the profit margin gets bigger **[2]**

Q.8 Projects L and S each have an initial cost of Rs.10000, followed by a series of positive cash inflows. Project L has total, undiscounted cash inflows of Rs.16000, while S has total undiscounted inflows of Rs.15000. Further, at a discount rate of 10 percent, the two projects have identical NPVs. Which project's NPV will be more sensitive to changes in the discount rate?

A Project S.
B Project L
C Both projects are equally sensitive to changes in the discount rate since their NPVs are equal.
D Neither project is sensitive to changes in the discount rate, since both have NPV profiles which are horizontal.
E The solution cannot be determined unless the timing of the cash flows is known. **[2]**

Q.9 A firm buys an asset for Rs.10000 at the beginning of the period and sells it for Rs.10600 at the end of the period. Inflation during the period was 5%. It replaces the old asset with a new one costing Rs.11000. Under generally accepted accounting principles, the firm should report (Assume depreciation for the period was zero)

A A gain of Rs.600, because it sold the old asset for Rs.600 more than it paid for it.
B A gain of Rs.100, because the Rs.10000 that it paid for the asset must be restated as Rs.10500 to account for inflation.
C A loss of Rs.1000, because the new asset cost Rs.1000 more than the old one.
D A loss of Rs.500, because the new asset cost Rs.1000 more than the price of the old one after adjusting for inflation.
E Neither a gain nor a loss. **[2]**

Q.10 The total permanent investment by stockholders is equal to

A Capital in excess of par and retained earnings.
B Capital stock and retained earnings.
C Total stockholders' equity.
D Total stockholders' equity less retained earnings.
E Total stockholders' equity less capital in excess of par. **[2]**

Q.11 What are convertible securities? Explain why a company might issue convertible securities instead of straightforward debt or equity. **[8]**

Q.12 Briefly explain the concept of factoring? Differentiate between recourse and non-recourse factoring. **[5]**

Q.13 List the three main adjustments that have to be made to accounting profit to arrive at taxable profit? **[3]**

Q.14 Briefly explain the concept of “double taxation relief”? **[2]**

Q.15 A stock analyst has obtained the following information about J-Mart, a large retail chain:

? The company has non callable bonds with 20 years maturity remaining and a maturity value of Rs.1000. The bonds have a 12 percent annual coupon and currently sell at a price of Rs.1 273.8564.

? Correlation coefficient between return on J-Mart stock and market return is 50%. Standard deviation of the market return is 35% where as standard deviation of the J-Mart stock return is 105%.

? The current risk-free rate is 6.35 percent, and the expected return on the market is 11.35 percent. The company's tax rate is 35 percent.

The company anticipates that its proposed investment projects will be financed with 70 percent debt and 30 percent equity. Calculate the company's estimated weighted average cost of capital (WACC)?

[10]

Q.16 Parker Products manufactures a variety of household products. The company is considering introducing a new detergent. The company's CFO has collected the following information about the proposed product.

? The project has an anticipated economic life of 4 years.

? The company will have to purchase a new machine to produce the detergent. The machine has an up-front cost of Rs.2 million. The machine will be depreciated on a straight-line basis over 4 years. The company anticipates that the machine will last for four years, and that after four years, its salvage value will equal zero.

? If the company goes ahead with the proposed product, it will have an effect on the company's net operating working capital. At the outset, inventory will increase by Rs.140000 and accounts payable will increase by Rs.40000. The net operating working capital will be recovered after the project is completed.

? The detergent is expected to generate sales revenue of Rs.1 million the first year, Rs.2 million the second year, Rs.2 million the third year, and Rs.1 million the final year. Each year the operating costs (not including depreciation) are expected to equal 50 percent of sales revenue.

- ? The company's interest expense each year will be Rs.100,000.
- ? The new detergent is expected to reduce the after-tax cash flows of the company's existing products by Rs.250000 a year.
- ? The company's overall WACC is 10 percent. However, the proposed project is riskier than the average project for Parker; the project's WACC is estimated to be 12 percent.
- ? The company's tax rate is 40 percent.

What is the net present value of the proposed project?

[14]

Q.17 The Following information is available regarding the ending and beginning balances in Accounts Payable (AP), Inventory, and Accounts Receivable(AR):

	APs	Inventory	ARs
Ending	80,000	40,000	80,000
Beginning	100,000	50,000	85,000
Change	(20,000)	(10,000)	(5,000)

Net income for the period was Rs.480,000 which included depreciation expense of Rs.100,000.
Determine net cash from operations for the period

[6]

Q.18 The following information is available on Taft Technologies:

Annual sales	Rs.1,200,000
Current liabilities	Rs. 375,000
Days sales outstanding(DSO)(365-day year)	40
Inventory Turnover ratio	4.8
Current ratio	1.2

The company's current assets consist of cash, inventories, and accounts receivable.
How much cash does Taft have on its balance **[4]**

Q.19 Selected information from the 2006 financial statements of Company A and Company B is given below:

	Company A (Rs '000)	Company B (Rs '000)
Profit Before Interest and Tax	180	200
Debenture Interest Expense	30	144
Income Tax	70	25
Debentures	200	600
Average Total Assets	700	900
Average Shareholder's Equity	350	200

Which company is more successful in using leverage? Why?
Assume that both companies have similar business and similar operating risks. **[7]**

Q.20 The following information is available in respect of security X and Y:

Security	**Beta(ß)**	**Expected Return**
X	1.8	22.00%
Y	1.6	20.40%

If the risk free rate is 7%, are these securities correctly priced? What should be the risk free rate if they have to be correctly priced? **[6]**

Q.21 Skyline Ltd. was set up in December 1, 2003 to provide architectural advice to builders of apartments and office complexes. The trial balance of the company at the end of the first year of operations is as follows:

Skyline Ltd: Trial Balance as on November 30,2004 (Amount in Rs)

Account	**Debit**	**Credit**
Computers	15000	
Office Equipment	9000	
Office Supplies	3970	
Debtors	1710	
Cash	940	
Bills Receivable	3400	
Prepaid Rent	12000	
Creditors		3100
Unearned Fees		2800
Share Capital		20000
Dividends	1500	
Fee Revenue Earned		33320
Salaries Expense	10900	
Electricity Expense	460	
Telephone Expense	340	
Total	**59220**	**59220**

The following additional information is available:

? The computer was purchased on March 1, 2004 at a cost of Rs. 15000 and is expected to be useful for three years. The office equipment was purchased on May 1, 2004 for Rs. 9000 and has an estimated useful life of ten years. None of these assets has any salvage value.
? The inventory of supplies on November 30 is 1240.
? fee revenue of Rs. 6200 is due from customers.
? Unearned fees include Rs. 2100 earned in November.
? Salaries of architects for November totaling Rs. 2600 have not been paid.
? The company paid twelve months’ rent in advance on January 1, 2004 at Rs. 1000 per month.

- ? The Bills Receivable account represents a six-month bill for Rs. 3400 given by a customer on August 1, 2004. The bill carries interest at 15 percent per annum.
- ? Income tax expense of Rs. 2500 is payable on November 30.

Prepare a profit and loss account, a statement of retained earnings, and a balance sheet. **[15]**

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