Actuarial Society of India

EXAMINATIONS

22nd May 2007

Subject CT2 – Finance and Financial Reporting

Time allowed: Three Hours (10.00 – 13.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. ***Do not write your name anywhere on the answer sheets. You have only to write your Candidate's Number on each answer sheets.***
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

Please return your answer scripts and this question paper to the supervisor separately.

Q. 1) Last year, Ambani Brothers had positive net cash flow, yet cash on the balance sheet decreased. Which of the following could explain the company's financial performance?

a. The company issued new common stock.
b. The company sold off some of its assets.
c. The company issued new long-term debt.
d. The company purchased a lot of new fixed assets
e. The company eliminated its dividend **[2]**

Q. 2) If holder of convertible stock chooses not to convert then the security might continue as loan stock or preference share for a period of time known as the

a. Terminal Period.
b. Termination Period.
c. Non Conversion Period.
d. Stub
e. Stack **[2]**

Q. 3) Which of the following Statements is true:

a. Preference shareholder never has any voting rights.
b. Preference shareholder gets dividends only when profits are there.
c. Preference shareholder ranks above ordinary shareholder on winding up of the company.
d. Both 'a'& 'b'.
e. Both 'b' & 'c'. **[2]**

Q. 4) A corporation expects to have earnings available to common shareholders (net profits minus preferred dividends) of Rs. 1,000,000 in the coming year. The firm plans to pay 40 percent of earnings available in cash dividends. If the firm has a target capital structure of 40 percent long-term debt, 10 percent preferred stock, and 50 percent common stock equity, what capital budget could the firm support without issuing new common stock?

a. Rs. 2,000,000
b. Rs. 600,000
c. Rs. 1,200,000
d. Rs. 800,000
e. Rs. 700,000 **[2]**

Q. 5) Which of the following statements is most correct?

a. Agency conflicts between stockholders and managers are not really a problem when outsiders (i.e., non-managers) own shares in a corporation.
b. Managers may operate in stockholders' best interests, or managers may operate in their own personal best interests. As long as managers stay within the law, there are no effective controls that stockholders can implement to control managerial decision making.
c. The agency conflicts between bondholders and stockholders can be reduced with the use of bond covenants.
d. An agency relationship exists when one or more persons hire another person to perform some service but withhold decision-making authority from that person.
e. All of the statements above are false. **[2]**

Q. 6) Normal projects C and D are mutually exclusive. Project C has a higher net present value if the WACC is less than 12 percent, whereas Project D has a higher net present value if the WACC exceeds 12 percent. Which of the following statement is most correct?

a. Project D has a higher internal rate of return.
b. Project D is probably larger in scale than Project C.
c. Project C probably has a faster payback.
d. All of the statements above are correct.
e. Answers a and c are correct. **[2]**

Q. 7) Which of the following investors would be happy to see the stock price rise sharply?

a. Investor who owns the stock and put option.
b. Investor who owns the stock and has sold a call option.
c. Investor who has sold a call option.
d. A & B above.
e. A , B and C above **[2]**

Q. 8) Two fellow financial analysts are evaluating a project with the following net cash flows:

Year	Cash Flow
0	-Rs.10,000
1	1,00,000
2	-1,00,000

One analyst says that the project has an IRR of between 12 and 13 percent. The other analyst calculates an IRR of just under 800 percent, but fears his calculator's battery is low and may have caused an error. You agree to settle the dispute by analyzing the project cash flows. Which statement best describes the IRR for this project?

a. There is a single IRR of approximately 12.7 percent.
b. This project has no IRR, because the NPV profile does not cross the X axis
c. There are multiple IRRs of approximately 12.7 percent and 787 percent.
d. This project has two imaginary IRRs.
e. There are an infinite number of IRRs between 12.5 percent and 790 percent that can define the IRR for this project. **[2]**

Q. 9) The specific accounting treatment given to a particular debt or equity security depends on all of the following criteria except:

a. The degree of influence or control the investor has over the investee.
b. Whether the security is considered a debt or equity security.
c. The length of time management intends to own the security.
d. The type of entity purchasing the security.
e. A & C above. **[2]**

Q. 10) The purchase of supplies totaling Rs. 500 on account was incorrectly recorded as a debit to Supplies and a credit to Cash. Which of the following statements regarding the effect of this error is true?

a. Assets and liabilities will be understated.
b. Assets and liabilities will be overstated.
c. Only assets will be understated.
d. Only assets will be overstated.
e. The errors offset each other so that assets and liabilities will be correctly stated. **[2]**

Q. 11) What is a swap? Who are the parties in a swap agreement? How is a swap generally priced? What risks are faced by the parties in a swap agreement? **[8]**

Q. 12) What is scrip dividend? When will a company prefer scrip dividend over cash dividend? What is the impact of scrip dividend on the balance sheet? **[5]**

Q. 13) What is indexation allowance? How is it calculated? How does indexation allowance impact the calculation of chargeable gain? **[3]**

Q. 14) What are excise duties? Can excise duties influence patterns of consumer expenditure **[2]**

Q. 15) You are employed by CGT, a Fortune 500 firm that is a major producer of chemicals and plastic goods: plastic grocery bags, styrofoam cups, and fertilizers. You are on the corporate staff as an assistant to the Vice-President of Finance. This is a position with high visibility and the opportunity for rapid advancement, providing you make the right decisions. Your boss has asked you to estimate the weighted average cost of capital for the company. Following are balance sheets and some information about CGT.

Assets	
Current assets	Rs. 38,000,000
Net plant, property, and equipment	Rs. 101,000,000
Total Assets	**Rs. 139,000,000**
Liabilities and Equity	
Accounts payable	Rs. 10,000,000
Accruals	Rs. 9,000,000
Current liabilities	Rs. 19,000,000
Long term debt (40,000 bonds, Rs. 1,000 face value)	Rs. 40,000,000
Total liabilities	Rs. 59,000,000
Common Stock 10,000,000 shares)	Rs. 30,000,000
Retained Earnings	Rs. 50,000,000
Total shareholders equity	Rs. 80,000,000
Total liabilities and shareholders equity	**Rs. 139,000,000**

You check *The Wall Street Journal* and see that CGT stock is currently selling for Rs. 7.50 per share and that CGT bonds are selling for Rs. 889.50 per bond. These bonds have a 7.25 percent annual coupon rate, with semi-annual payments. The bonds mature in twenty years. The beta for your company is approximately equal to 1.1. The yield on a 6-month Treasury bill is 3.5 percent and the yield on a 20-year Treasury bond is 5.5 percent. The expected return on the stock market is 11.5 percent, but the stock market has had an average annual return of 14.5 percent during the past five years. CGT is in the 40 percent tax bracket.

Using the CAPM approach, what is the best estimate of the cost of equity, after-tax cost of debt, and WACC for CGT? **[10]**

Q. 16) MS Systems (MSS) has developed a new security device using imaging technology (CIT) for identification purposes. Since September 11, 2001, demand for security systems has increased tremendously. Mr. Manu Sharma, CEO of MSS had worked in a research lab on imaging and felt that his knowledge of gums and imaging could be used to develop a security product. A few venture capital firms got interested in the idea and invested the initial capital. So far MSS has invested Rs. 2 crores to develop the technology solution.

The product has gone through several rounds of testing and has got a favourable response from potential customers. MSS needs to take a decision about investing a further Rs. 10 crores to take the product to the market. Manu Sharma estimates that there would be demand for 10 systems in a year. He feels that beyond 5 years there would be no demand for this product since by then more advanced products would be there in the market as well as the burglars would become aware of the hazards of chewing gum. The investment of Rs. 10 crores would be in plant and equipment, which is depreciated at the rate of Rs. 1.50 crores per year. MSS estimates that the plant and equipment could be sold at a market value of Rs. 3 crores at the end of 5 years.

The price of each CIT security device would be increased at 10 % each year starting with Rs. 1 crore per device in the first year. The annual increase in the price of the device is expected to cover the higher cost of production as a result of inflation. It is expected that 10 units would be sold every year. Net working capital requirement is 10% of sales and has to be provided for at the beginning of the year and is entirely recovered at the end of 5 years. Cost of goods sold, excluding depreciation is 60 % of revenues. The tax rate is 30 %.

MSS already owns the land for the project, which currently has a market value of Rs. 1 crore (net of tax effect), but Manu Sharma is of the opinion that this need not be considered as there is no cash outflow associated with using the land that the firm already owns. His venture capital investors are insisting that that the Rs. 2 crores invested in R&D should be recovered and should be included as part of the investment in the project. MSS is a company that is focussed on creating wealth for its investors. The nominal opportunity cost of capital for MSS was 20 %.

Should MSS invest in the project? **[14]**

Q. 17) List examples of accounting practices that can lead to manipulation of reported figures? **[4]**

Q. 18) The details of the two companies are as follows: -

	Assets	Rs'000	Capital	Rs'000
Company True Ltd	Fixed Assets	1,00,00.00	Share capital (Rs 10 per share)	40,00.00
			Debt 7.5% 2020	60,00.00
Company False Ltd	Fixed Assets	1,00,00.00	Share capital (Rs 10 per share)	1,00,00.00

Both companies earned Rs 10,00,000 on their assets in the previous 12 months before the payment of interest, ignore tax and both companies' share price stand at Rs 10 per share in the market.

Comment on the following statements: -

a) By gearing up True Ltd has increased the expected return to its equity shareholders. (3)

b) If both the companies increase their return on total capital employed, True Ltd will benefit more than False Ltd. Explain this statement with an example. (2)

[5]

Q. 19) For each of the following ratios: -

i. Net dividend yield
ii. Dividend cover (net basis)
iii. P/E Ratio

a) Define the ratios? (1.5)

b) State the relationship between the above 3 ratios & calculate the P/E ratio based on the following information: -

- Gross dividend yield is 2.25%
- Dividend cover (net basis) is 1.9 times.
- Tax rate on dividend is 10% (1.5)

c) Explain why the P/E ratio and dividend yield are often used as indicators of relative cheapness or dearness of a share? (5)

[8]

Q. 20) Following information has been extracted from the book keeping records of ABC Plc: -

Trial Balance on 31st December'2006

Fig in Rs'000

Sales		2,70,00.00
Purchases	1,72,32.00	
Stock at 1st January'2006	55,00.00	
Bank		2,50.00
Administrative salaries	12,00.00	
Factory rent & insurance	5,60.00	
Telephone expenses	2,20.00	
Advertising expenses	6,50.00	
Debenture interest paid	1,20.00	
Factory heat & lighting	4,60.00	
Bank overdraft interest	50.00	
Audit Fees	2,00.00	

Preference dividend paid	48.00	
Equity shares of 25p each		25,00.00
8% Preference shares of Rs 1 each		12,00.00
Profit & loss account at 1st January'2006		5,61.50
12% Debentures 2015		20,00.00
Fixed assets at cost	77,60.00	
Depreciation of fixed assets at 1st January'2006		18,88.50
Debtors	19,00.00	
Creditors		5,00.00
	3,59,00.00	3,59,00.00

Additional Information: -

- The closing stock at 31st December'2006 was valued at Rs. 72,50,000.
- Depreciation is to be charged on the following basis: -
  - Factory:- purchased on 1st January'2003 for Rs 38,00,000 and depreciated on a straight line basis over 25 years.
  - Vehicles:- purchased on 1st January'2004 for Rs 9,60,000 and depreciated on a reducing balance basis over 20 years assuming a residual value of Rs 60,000.
  - Machinery:- purchased on 1st January'2002 for Rs 30,00,000 and depreciated on a straight line basis over 10 years.
- Electricity used but not paid was Rs 15,000.
- The annual insurance policy of Rs 2,40,000 was taken out on 31st March'2006.
- Corporation tax rate to be provided for is 30%.
- Debenture interest unpaid must be provided for.
- The directors have proposed that the remaining preference dividend be paid in full, and that a dividend of 2 paise per share be paid to the equity shareholders.

a) Using the above information calculate the depreciation charge for year 2006. (4)

b) Set out profit and loss account of ABC Plc for the year 2006. (8)

c) Set out balance sheet as at 31st December'2006. (5)

d) The directors of ABC Plc are under some pressure to report a higher than normal profit figure this year. It has been suggested that they might reduce the depreciation charge by revising their estimate of the useful lives of fixed assets. (4)

Explain whether it would be possible to restate profit by artificially depressing the depreciation charge.

[21]

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