INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

06th November 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. <u>However, answers to objective type questions could be written on the same sheet.</u>***

4. ***Fasten your answer sheets together in numerical order of questions. This, you may complete immediately after expiry of the examination time.***

5. ***Candidates should show calculations where this is appropriate.***

6. ***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 IAI."

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) The following statements regarding the NPV rule and the rate of return rule are true except:-

A. Accept a project if its NPV > 0
B. Reject a project if its NPV < 0
C. Accept a project if its rate of return > 0
D. Accept a project if its rate of return > opportunity cost of capital **[2]**

Q. 2) The following cash flows should be treated as incremental flows when deciding whether to go ahead with an electric car project except:

A. The consequent reduction in sales of the company's existing gasoline models (i.e.: incidental effects)
B. Interest payment on debt
C. The value of tools that can be transferred from the company's existing plants
D. The expenditure on new plants and equipment **[2]**

Q. 3) A listed company has recently given a two for one scrip issue. In the absence of any other new information, investors should expect: -

A. Both the earnings per share and stock price to remain unchanged from the pre-issue levels
B. Earnings per share to fall but the stock price to remain the same as what it was before the issue
C. Both the earnings per share and the stock price to fall after the issue.
D. Stock price will fall but earnings per share to remain the same as what it was before the issue **[2]**

Q. 4) Which of the following investors in the derivatives market may find that the contract (they have entered into) is a liability at expiry?

I Buyer of a call option
II Writer of a put option
III Buyer of a Put Option

A. I only
B. II only
C. III only
D. I and III **[2]**

Q. 5) Systematic risk in the context of equity is

A. Same as specific risk
B. Risk that cannot be diversified
C. Risk that can be diversified
D. Unmanageable risk **[2]**

Q. 6) Which of the following head doesn’t appear in a Profit & Loss A/c?

I) Accumulated Depreciation
II) Advance Tax
III) Deferred Tax
IV) Advertising Expenses

A. All the above
B. None of the above
C. I and III only
D. I, II and III **[2]**

Q. 7) Which of the following would be the most likely outcome of a one percent decrease in interest rates?

A. the value of a low coupon bond would increase by more than the value of a high coupon bond with the same maturity
B. the value of a low coupon bond would increase by less than the value of a high coupon bond with the same maturity
C. the value of a low coupon bond would decrease by more than the value of a high coupon bond with the same maturity
D. the value of a low coupon bond would decrease by less than the value of a high coupon bond with the same maturity **[2]**

Q. 8) A company’s share price stands at Rs. 20. The company has 20m shares in issue and the face value per share Rs. 5. The company intends to capitalize Rs. 100m of reserves by a scrip issue and then to make a 1 for 2 right issue at Rs. 9 per share. Calculate the theoretical price of the share after both the scrip issue and the rights issue?

A. Rs. 9.25
B. Rs. 9.33
C. Rs. 9.67
D. Rs. 9.74 **[2]**

Q. 9) Which of the following would normally be included in the calculation of gearing:

I. debenture loans
II. preference shares
III. bank overdraft

A. I and III above
B. I and II above
C. All the above
D. None of the above. **[2]**

Q.10) A company's profit for corporation tax purposes is different from its profit for accounting purposes. Which of the following could account for this?

I. depreciation is not allowed as an expense for tax purposes
II. taxable profit is calculated for the tax year and not the accounting year
III. taxable profit is calculated on a totally different basis from accounting Profit

A. I only
B. II only
C. I and II above
D. I and III above **[2]**

Q. 11)

a) Define the following terms: -

- Bull Market.
- Custodian.
- Emerging Market.
- Future Contract. (2)

b) Explain the difference between the following: -

- Recourse and Non-Recourse factoring.
- Liability under a partnership firm and a limited company. (2)

c) Draw up a table to compare a partnership, a limited liability partnership and a limited company with respect to: -

- Legal Identity.
- Documentation.
- Disclosure.
- Tax. (4)

[8]

Q. 12)

a) i). Explain briefly about "Double Taxation" agreements and how do they benefit the companies (2.5)

ii). Give an example on how "Double Taxation" agreements can be misused? (1.5)

b) i.) Explain briefly about "Taper Relief" (2)

ii.) Give an example of a "Taper Relief" system. (1)

[7]

Q. 13)

a) List the advantages of listing for a company. (4)

b) Discuss the possible uses of interest rate swaps and currency swaps by a manufacturing company? (5)

[9]

Q. 14)

a) You have a project that does not require an initial investment but has its expenses spread over the life of the project. Can the IRR be estimated for this project? Why or Why not?

(2)

b) DASA Inc. has 40 million shares outstanding, selling at $20 per share and a debt-equity ratio (in market value terms) of 0.25. Correlation coefficient between return on DASA Inc stock and market return is 66%. Standard deviation of the market return is 40% where as standard deviation of the DASA Inc stock return is 70%. The firm currently has a AA rating and the default spread at this rating is 2%. The current risk free rate is 8% and the market risk premium is 5.5% and the tax rate applicable to the company is 40%.

What is the firm's current weighted average cost of capital?

(10)

[12]

Q. 15)

a) Explain the remark “ loan capital normally carries a relatively low risk for the lender”? (1.5)

b) List all the efficiency ratios with formula and purpose of the ratio. (1.5)

c) “ Historical cost accounting tends to overstate profits during times of inflation”. Explain the above statement with the help of 4 examples (2)

[5]

Q. 16)

a) i.) Define the balance sheet equation. (0.5)

ii.) What are the additional entries of assets and liabilities that are found in the balance sheet of an insurance company? (3.5)

b) Company ABC recently bought a 100% holding in company XYZ for Rs 10 Lakhs. Immediately prior to the acquisition the two separate balance sheet were as follows: -

Fig in Rs’000	**Company ABC**		**Company XYZ**	
Machinery				
Cost	300		400	
Accumulated Depreciation	(90)	210	(80)	320
Land		600		424
Inventories		150		135
Trade receivables		225		195
Cash		115		56
TOTAL ASSETS		1300		1130

Ordinary Share Capital	400	200
Other Reserves	250	100
Retained Earnings	100	185
TOTAL EQUITY	750	485
Long Term Borrowings	250	389
Trade Payables	200	144
Tax Provision	0	67
Dividend Provision	100	45
TOTAL LIABILITIES	550	645
TOTAL EQUITY AND LIABILITIES	1300	1130

i.) Calculate the goodwill involved in the transaction. (1)

ii.) Company ABC only managed to buy 80% of company XYZ (for Rs 8 Lakhs), leaving 20% of company XYZ in the hands of minority shareholders. Calculate the minority interest and explain under which head it appears in the consolidated Balance Sheet. (2)

[7]

Q. 17) You run a mail-order firm, selling upscale clothing. You are considering replacing your manual ordering system with a computerized system to make your operations more efficient and to increase sales.

The computerized system will cost $ 10 million to install and $ 500,000 to operate each year. It will replace a manual order system that costs $ 1.5 million to operate each year. The system is expected to last 10 years and will have no salvage value at the end of the period.

The computerized system is expected to increase annual revenues from $ 5 million to $ 8 million for the next 10 years. The cost of goods sold is expected to remain at 50% of the revenues. The tax rate is 40%.

As a result of the computerized system, the firm will be able to cut its inventory from 50% of revenues to 25% of revenues immediately. There is no change expected in other working capital components. The cost of capital is 8%.

a) What is your expected cash flow today? (4)

b) Should you computerize the system? (8)

[12]

Q. 18) Shown below is the balance sheet dated 31st December 2005 for RSM company making car parts: -

Balance sheet Figures are in Rs'000

ASSETS		
Non- current assets		
Factory		1300
Machinery		1350
		2650
Current assets		
Inventories		200
Trade receivables		125
Cash		25
		350
Total assets		3000
EQUTI Y AND LIBILITIES		
Issued ordinary shares of Rs 10		1000
Other Reserves		
Share premium account	300	
Revaluation reserve	125	425
Retained earnings		123
Total Equity		1548
Non- current liabilities		
8% Convertible loan stock 2015		500
10% Debenture 2010		300
		800
Current Liabilities		
Trade payables		250
Bank loan		200
Dividends Payable		80
Tax payable		122
		652
Total liabilities		1452
Total equity and liabilities		3000

During 2006, the following occurred

• Sales	18,00,000
• Decrease in inventories	27,000
• Purchase of raw material	6,40,000
• Staff costs	1,15,000
• Electricity costs	31,000
• Advertising & delivery costs	42,000
• Cash payments received	14,24,000
• Increase in trade payables	48,000
• Dividends paid	70,000
• Tax paid	1,40,000

You are also given the following information:

- The company repaid its bank loan on 5 January 2006.

- The factory was originally purchased in December 1990. It was being depreciated on a straight-line basis over 20 years, with an assumed residual value of zero. In 2005 it was revalued from its then current value of Rs 15,00,000. The machinery was purchased in 2005 for a price of Rs 15,00,000. It is being depreciated over a period of ten years.

- The revaluation reserve arises from the revaluation of the factory alone.

- The first conversion date for the 8% CULS was 15th December 2006. Rs 1,00,000 nominal was converted. The conversion terms were 2 shares for every Rs 50 nominal of convertible stock. Interest was paid before the conversion took place.

- The directors were concerned about the level of trade receivables at the end of 2006, and decided to set up a provision for bad debts equal to 10% of the trade receivables outstanding at the end of the accounting year.

Assuming a tax rate of 30% and a proposed and approved (by the shareholders) payout ratio of 30% draw up the income statement for 2006 and the balance sheet dated 31st December 2006. **[20]**

(You are required to provide notes to the accounts, although you should show your workings clearly).

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