INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

21st May 2008

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) Which of the following is treated as a credit item in the trial balance

I. Investment income
II. Short term investments
III. Credit purchases
IV. Depreciation

Options: - **A**. – IV only
B. – II and III
C. – I and IV
D. – I only **[2]**

Q. 2) Which of the following strategies would not help a company to reduce its exposure to rising interest rates?

i. The negotiation of an interest rate swap
ii. The purchase of a put option on an interest rate future
iii. The purchase of a bond future
iv. The sale of an interest rate future **[2]**

Q. 3) NTP Ltd paid Rs. 5,75,000 for 1,00,000 shares in PFC Ltd. PFC Ltd's share capital was 1,50,000 shares of Rs. 3 per equity share, and at the time of the share purchase it had reserves of Rs. 75,000. Calculate the goodwill associated with the purchase.

i. Rs. 2,75,000
ii. Rs. 50,000
iii. Rs. 2,25,000
iv. Rs. 5,00,000 **[2]**

Q. 4) The following information is based from the accounts of JMW Ltd for 2007 and 2008

	2007	2008
Sales	6,00,000	7,50,000
Net profit before tax and interest	60,000	90,000
Long-term loans	75,000	2,25,000
Share capital	75,000	90,000
Reserves	37,500	60,000

Which of the following is true about the performance of JMW Ltd: -

A. The return on capital employed has fallen because the fall in the asset utilization ratio has outweighed the rise in the profit margin
B. The return on capital employed has risen because the asset utilization ratio has risen
C. The return on capital employed has risen because the profit margin has risen
D. The return on capital employed has fallen because the fall in the profit margin has outweighed the rise in the asset utilization ratio **[2]**

Q. 5) Which of the following is NOT a requirement for a published report and accounts?

- **A.** The accounting policies selected must be judged to be the most appropriate for giving a true and fair view of the financial position of the company
- **B.** The accounts should be compiled assuming that the company is a going concern
- **C.** Income and expenditure should be taken into account in the year in which it is earned or incurred respectively.
- **D.** The accounts should be calculated on a prudent basis **[2]**

Q. 6) Which of the following is least likely to give rise to agency costs?

- **A.** A software company which employs managers to carry out day-to-day operations.
- **B.** A heavy vehicle manufacturing company where there are managers and unions working together.
- **C.** An oil rigging company where government takes a great interest.
- **D.** A retailing business where owner is the manager **[2]**

Q. 7) Which of the following is NOT a valid reason for using simulation in order to evaluate an investment project?

- **A.** The cash flows are uncertain.
- **B.** The required rate of return might vary during the life of the project.
- **C.** Decision makers are interested in the range of possible outcomes.
- **D.** Decision makers require an accurate forecast. **[2]**

Q. 8) XYZ plc is a listed company. Which of the following is a specific risk that can be diversified away by shareholders?

- **A.** XYZ Plc is highly geared and it is exposed to increases in interest rates.
- **B.** XYZ Plc has a great deal of foreign competition and so changes in exchange rates can affect its competitive position.
- **C.** XYZ Plc’s main product line requires a steady supply of a rare mineral that is only found in a region that is politically unstable.
- **D.** XYZ Plc produces luxury goods, demand for which is highly vulnerable to change in the economic climate. **[2]**

Q. 9) You are an actuarial consultant helping a leading manufacturing company ABC Plc in evaluating the projects they want to undertake and the following information is provided. At 16% discount rate the NPV of Project A is INR 350,000 and NPV of Project B is INR 500,000. Which of the following are correct statements?

- **A.** The payback period need not be considered in evaluating the projects.
- **B.** If ABC Plc has set a hurdle rate of 16% then both the Projects are viable.
- **C.** Project A is preferable for Project B.
- **D.** The internal rate of return for Project A is higher than the Project B. **[2]**

Q. 10) Which of the following is the most appropriate basis for determining the required rate of return on a major project considered by a quoted company?

A. The company's weighted average cost of capital (WACC).
B. The interest rate on the bank loan raised in order to finance the project.
C. A specific rate for the project determined according to project's total risk.
D. A specific rate for the project determined according to the project's systematic risk

[2]

Q. 11) Explain how tax might influence the shareholders' preference for debt financing versus equity financing in the company's gearing decision. **[5]**

Q. 12)

a) Who are the main stakeholders in an organization and why might their interest conflict? (5)

b) In ABC proprietary company all share holders seek to be as rich as possible in such situation what is the objective of financial managers? (1.5)

c) Capital Markets provide information that will help the financial manager to take the decisions – Discuss. (3.5)

[10]

Q. 13) a) What is the meaning of the word "quotation"? List all the methods of obtaining quotation. (3)

b) Company P Ltd has borrowed at variable interest rates and wants to protect itself against increase in market interest rates-

i) What kind of options would they use? (0.5)
ii) How will these options minimize the above risk? (2.5)

c) Neeta is considering buying shares in Company P Ltd, but is concerned by the fact that the company has a large number of options outstanding that might dilute her investment-

i) Explain what is meant by dilution in this context, and (2)
ii) Explain how it might affect Neeta's investment. (2)

[10]

Q. 14) **a)** Hilliard Corp. wants to calculate its weighted average cost of capital (WACC). The company's CFO has collected the following information:

- The company's long-term bonds currently offer a yield to maturity of 8 percent.
- The company's stock price is \$32 per share (P_0 = \$32).
- The company recently paid a dividend of \$2 per share (D_0 = \$2.00).
- The dividend is expected to grow at a constant rate of 6 percent a year (g = 6%).

- The company pays a 10 percent flotation cost whenever it issues new common stock (F = 10%).
- The company's target capital structure is 75 percent equity and 25 percent debt.
- The company's tax rate is 40 percent.
- The company anticipates issuing new common stock during the upcoming year.

What is the company's WACC? (10)

b) A large multinational insurance company is considering a major international expansion. The directors of the company are considering investing heavily in a feasibility study in order to determine whether to start their operations in a new country. There are many factors that would determine the success or otherwise of this new venture. For example:

- The fixed costs may be high as it may be difficult to get suitable staff without offering very substantial salaries.
- It is difficult to predict how competing firms who are already established in that country will respond to the competition.
- The new host country's currency is very volatile compared to the company's home currency and all profits from the new office would be earned in that host currency.

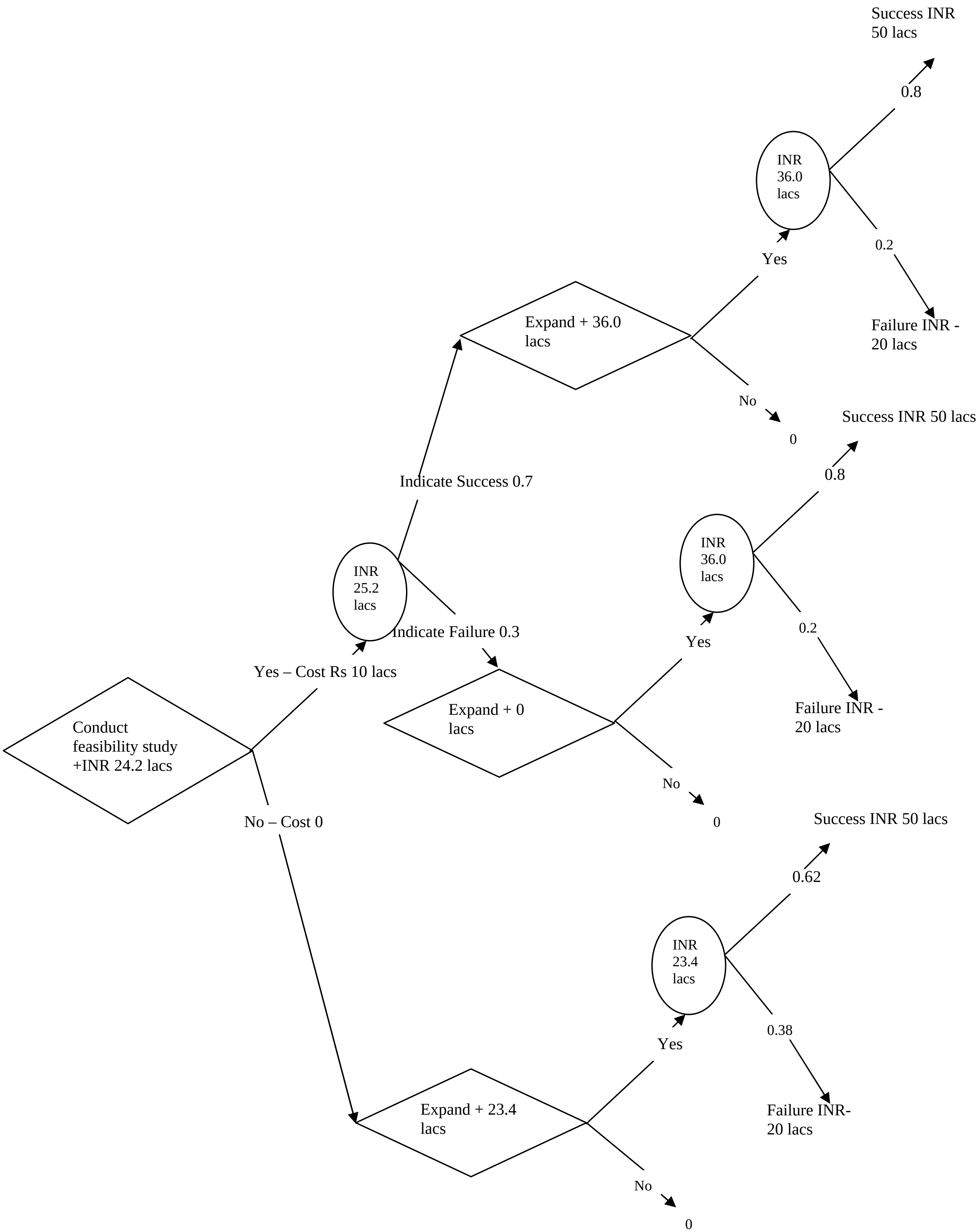
The feasibility study is a very costly undertaking in itself and so the firm is considering the respective merits of the following three options:

- Conduct a feasibility study, prior to making a decision to whether proceed.
- Proceed with the expansion without first undertaking a feasibility study.
- Abandon the whole idea of the expansion.

One of the directors of the firm has prepared a probability tree using the following assumptions:

- If the expansion goes ahead it will yield either of the following outcomes: Success (with a positive net present value (NPV) of INR 50 lacs) and Failure (with a negative NPV of INR 10 lacs)
- The feasibility study will cost INR 100,000 and will have an 80% probability of correctly predicting the outcome of the expansion.
- There is a 70% probability that the feasibility study will indicate that the expansion will succeed and a 30% probability that it will indicate failure.
- If the expansion proceeds without the feasibility study it has a 62% probability of success and a 38% probability of failure.

Using these assumptions one of the directors of the company has prepared the following probability tree and claims that the expansion is likely to prove successful, but the firm should undertake the feasibility study nevertheless.


Conduct
feasibility study
+INR 24.2 lacs
Yes – Cost Rs 10 lacs
No – Cost 0
INR
25.2
lacs
Indicate Success 0.7
Indicate Failure 0.3
Expand + 36.0
lacs
Yes
No
0
INR
36.0
lacs
0.8
Success INR
50 lacs
0.2
Failure INR -
20 lacs
Expand + 0
lacs
Yes
No
0
INR
36.0
lacs
0.8
Success INR 50 lacs
0.2
Failure INR -
20 lacs
Expand + 23.4
lacs
Yes
No
0
INR
23.4
lacs
0.62
Success INR 50 lacs
0.38
Failure INR-
20 lacs

Another director has prepared a simulation of the investment and has simulated the outcome of proceeding for 10,000 cycles. This suggests that the expected net present value of the expansion is negative, whether the feasibility study is conducted or not.

i). Explain why the probability tree suggests that the firm should conduct the feasibility study, even though the expansion is likely to be success. (2)

ii). Explain when it might be appropriate to use a probability tree in the evaluation of a capital investment project. (2)

iii). Explain why the other director's simulation exercise may be more reliable than the probability tree. (2)

iv). Describe the prerequisites of a "Successful" simulation of a capital investment project. (2)

v). It has been suggested that managers often use capital investment appraisal techniques in order to justify decisions that they have already taken. State, with reasons, whether or not you agree with this suggestion. (2)

[20]

Q. 15) a) Define the following ratios and explain the main limitations of these ratios: -

i). Income Cover (1.25)
ii). Asset Cover (0.75)

b) The following ratios have been calculated from financial statements of two companies of similar size and same industry:-

	Y LTD	S LTD
Gross Profit Ratio	40%	20%
Net Profit Ratio	32%	16%
Return on capital employed	10%	14%

Explain which of the two companies is more profitable and why? (3)

[5]

Q. 16) a) Name 4 users of financial statements and explain with reasons there interest in financial Statements? (4)

b) Topspin Ltd is in the process of preparing its balance sheet for 31st December 2002. So far, the items (valued at 31st December 2002 unless otherwise stated) are:

	Rs'000
Non-current assets at cost	672
Accumulated Depreciation (as on 31st December 2001)	175
Current Assets	290
Long- term loans	125
Share Capital	225
Share premium	75
Revaluation reserve	155
Retained earnings (as on 31st December 2001)	180

For the year to 31st December 2002:

- The depreciation figure in the income statement is Rs 12,000
- The profit after tax is Rs 30,000
- The directors distributed half of the company's earnings to its shareholders in the form of a dividend.

The company's accountants take the view that the company's non-current assets should be revalued at Rs 7, 25,000.

Prepare the balance sheet of Topspin Ltd at 31st December 2002 taking into account the revaluation of the non – current assets. (2)

[6]

Q. 17) A company has experienced volatile earnings in the last 5 years. The underlying business is unpredictable and risky and involves a high proportion of overseas earnings. List the steps the management can take to reduce the volatility in reported earnings for equity share holders.

[4]

Q. 18) a) What are subsidiaries and associates companies? (2)

b) Explain the following statements: -

i. Balance sheet always "balance" why? (3)

ii. Going concern assumption may simplify the preparation of financial statements, how? (3)

c) The balance sheets as on 31–03 –2006 and 31-03-2005 of Gupta textiles limited are given below:-

			Rs in Lakhs 31-03-2006	31-03-2005
Fixed Assets at Cost	750	700		
Less depreciation	(400)	(350)	350	350
Investments			250	300
Stock			162	255
Trade debtors			215	250
With Bankers			175	130
Total Assets			1,152	1,285
Share Capital			150	150
Reserves			237	115
12% Secured Debentures 2010			350	300
Trade Creditors			140	243
Provision for taxation			140	249
Provision for dividend			135	228
Total liabilities			1,152	1,285

During the financial year 2005-2006, the following transactions took place: -

- Sales 1,000
- Raw material and wages at factory 412
- Office expenses and wages at office 155
- Net return on long term investments 8%
- Tax charge on 2005-2006 profits 111
- Purchase of machinery on 31-3-2006 50
- Issue of further Debentures on 2-4-2005 50

Prepare the Profit & Loss Account and Cash flow statements for the financial year 2005-2006. (12)

[20]

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