INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

13th May 2011

Subject CT2 – Finance and Financial Reporting

Time allowed: Three Hours (10.00 – 13.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1) ***Please read the instructions on the front page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception***

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) ***In addition to this paper you will be provided with graph paper, if required.***

AT THE END OF THE EXAMINATION
Please return your answer book and this question paper to the supervisor separately.

Q. 1) In times of rising prices, the historical cost convention has the effect of:

A) understating profits and overstating balance sheet items
B) understating profits and understating balance sheet items
C) overstating profits and understating balance sheet items
D) overstating profits and overstating balance sheet items

[2]

Q. 2) Which of the following is the best reason for NOT referring to the working capital section of a company's latest balance sheet when deciding whether that company is a good risk for purposes of granting trade credit?

A) A company's liquidity says nothing about its ability to pay debts.
B) It is reckless to base such decisions on information provided by the customer.
C) The figure for working capital is likely to be distorted.
D) The information will almost certainly be out of date.

[2]

Q. 3) Owner Co. Ltd. owns 60% of the ordinary share capital of M Ltd and classifies M Ltd as a subsidiary. Owner Co. Ltd. owns 25% of the ordinary share capital of O Ltd and classifies O Ltd as an associate company. Each of the three companies have tangible fixed assets worth 1million. What total will appear under tangible fixed assets in the consolidated financial statements published by the Owner Group?

A) 1.6 million
B) 1.85 million
C) 2.0 million
D) 3.0 million

[2]

Q. 4) A company's share price stands at 2.00. It has 20 million shares in issue and the nominal value of its shares is 50p. It intends to capitalise 10 million of reserves by a scrip issue and then to make a 1 for 2 rights issue at 80p. What is the theoretical price of the shares after both the scrip issue and the rights issue?

A) 80 paise
B) 93.33 paise
C) 133.33 paise
D) 160 paise

[2]

Q. 5) All the claimants to a firm's income and value who are bound together by a complex web of contract are called

A) Shareholders
B) Stakeholders
C) Bondholders
D) Employees

[2]

Q. 6) Which of the following instruments is often used by companies that requires regular series of payments

A) Commercial Paper
B) Leasing
C) Bills of exchange
D) Invoice Discounting

[2]

Q. 7) Which of the following statement is the least accurate –

A) The discounted payback period is generally longer than the payback period.
B) The IRR can be positive even if the NPV is negative
C) The payback period considers all cashflows through out the entire life of a project
D) The shareholder value approach is an extension of the NPV approach of capital project appraisal

[2]

Q. 8) An actuarial student is analyzing a project that has yearly positive and negative cashflows. The actuarial student has no other information other than that the project runs for three years and the cumulative cash flows of the project for three years are {-20,000, 20,800, 10}. Based on the given information what can be said of the internal rate of return on the project

A) There are no negative solutions
B) There is no solution
C) There is a unique positive solution
D) None of the above

[2]

Q. 9) 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. 10) 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 20% discount rate the NPV of Project A is INR 500,000 and NPV of Project B is INR 6,50,000. 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 20% 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. 11) Draw diagrams to show the profit or loss at expiry as a function of the underlying asset price for:

A) the holder of a call option
B) the writer of a put option
C) the buyer of a futures contract
D) the seller of a futures contract

Label your diagrams appropriately.

[4]

Q. 12) Define following:

A) Scrip dividend and two possibilities under it.
B) IFRS
C) Technical and non technical accounts
D) Opportunity cost

[8]

Q. 13) Warren Buffett cannot understand why his business is short of cash as it made profits of over 100,000 last year. Explain why there can be differences between profits or losses generated, and cash received.

[6]

Q. 14) An article on front page of the "Economics Times" stock repurchase noted that "An increasing number of companies are finding that the best investment they can make is in themselves" in the current time of depressed market.

Discuss this view. How is the desirability of repurchase affected by company prospects and the price of its stock?

[10]

Q. 15) A company intends to acquire a factory and 600,000 of plant and machinery. Explain the taxation implications of leasing these assets rather than purchasing them outright.

[7]

Q. 16)
1. What are the three key adjustments to accounting profit to arrive at taxable profits? (1.5)

2. Give two examples of tax free income and tax free expenditure each while calculating taxable income under Indian Tax Laws. (2)

3. Give three examples of exceptions to chargeable capital gains tax. (1.5)

[5]

Q. 17) Mumbai Power & Light Ltd (MPL) is the primary subsidiary of India Power & Light Group, representing 97% of their operating revenues. MPL is a utility company that supplies electric service throughout most of Mumbai eastern sorroundings. Their service area contains 27,605 square miles which translates into approximately 3.4 million customers. Of these 3.4 million customers, as a percentage of operating income, roughly 55% comes from residential customers, 35% from commercial, 4% from industrial, and the remaining 6% from other sources.

Manu Sharma, a senior contracts agent in the at MPL's Power Plant is debating on whether to renew or replace the commercial nuclear reactor's reactimeter. A reactimeter is a vital component of the nuclear power generating process.

The core of a nuclear reactor must be maintained at a certain temperature and must possess a particular chemical composition. Any deviation from this sensitive optimal mix will result in the sub-optimization of the plant and a corresponding waste of energy. The reactimeter is a computer with accompanying software that is used to monitor the requisite characteristics of the Reactor Coolant System (RCS) and make minor adjustments as needed.

Alternative 1:

In order to determine whether the reactimeter should be renewed or replaced, Manu had to gather some financial information. If the current computer system is upgraded and new software is purchased, the cost will be INR 80,000. An additional INR 5,000 will be required to have the system installed and calibrated for accuracy. The renewed computer system will have a useful life of just five years and will be depreciated at rate of 40% on Written Down Value basis. Only the purchase cost of INR 80,000 will be depreciable, not the installation cost.

At the end of the five year period, the renewed machine can be sold for INR 5,000 before taxes. The renewed machine would also result in an increase in net working capital of INR 20,000. Net profits resulting from an increase in operational efficiency for each year will be as follows:

Table 1

Year	Net increase in profits
1	INR 650,000
2	INR 425,000
3	INR 317,000
4	INR 220,000
5	INR 129,000

Alternative 2:

The new system will also have a five year life and will be depreciated at rate of 40% on Written Down Value basis. The fully depreciable cost of the new system will be INR 100,000. Installation costs will be an additional INR 5,000. At the end of the five year period, the renewed machine can be sold for INR 10,000 before taxes. Implementing the new machine would result in an increase in net working capital of INR 15,000. If MPL decides to replace the old system with a new reactimeter, the resulting net profits will be:

Table 2

Year	Net increase in profits
1	INR 350,000
2	INR 350,000
3	INR 350,000
4	INR 350,000
5	INR 350,000

If a new system is purchased, the old system can be salvaged for INR 10,000. Finally, MPL has a 40% corporate tax rate.

a. What is the initial investment associated with both alternatives? (2)

b. Calculate the net after-tax operating cash inflows associated with both alternatives. (8)

c. Calculate the year 5 cash flow associated with the sale of the computer for both alternatives. That is, remember to consider that both computer systems can be sold at the end of the fifth year. (3)

d. Using a discount rate of 10%, calculate the present value of both alternatives. Which alternative should Manu choose? (5)

e. Without calculating the IRR can you decide which alternative has got higher IRR? Give reason for your answer. (2)

[20]

Q. 18) The following information has been extracted from the accounting records of Maanas Industries Ltd:

Account Balances at 31 March 2011 (In ‘000)
Administration costs -800
Bank overdraft -700
Debtors -1,300
Factory (Start of the year)cost -23,300

Factory(End of the year)depreciation- 1,800
Factory running costs- 1,200
Loan interest -1,680
Long term loans- 12,000
Machinery (End of the year) cost- 15,000
Machinery (End of the year)depreciation - 8,000
Manufacturing wages - 1,300
Materials — consumed- 1,600
Profit and loss account - 380
Sales - 13,000
Sales salaries - 1,600
Share capital - 12,000
Opening Stock-300
Closing Stock - 700
Trade creditors -600

Notes:

(a) The corporation tax charge for the year has been estimated at 1,290,000.

(b) The directors have proposed a dividend of 1,400,000.

(c) At the year end the directors had the factory professionally revalued. The valuer's report estimates the value of the property at 25,000,000. This value is to be incorporated into the balance sheet.

(d) During the year the company charged depreciation of 460,000 on the factory and 2,000,000 on the machinery. The company purchased new machinery at a cost of 2,700,000. There were no other transactions involving fixed assets.

All of these adjustments and transactions have been incorporated into the above figures.

1. Based on available information prepare profit and loss account for the year ended 31 March 2011 and the balance sheet as at that date. You should provide a note in respect of tangible fixed assets, but you are not otherwise required to provide notes to the accounts. You should, however, clearly show your workings.

[20]

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