INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

15th November 2013

Subject CT2 – Finance and Financial Reporting

Time allowed: Three Hours (10.30 – 13.30 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. However, answers to objective type questions could be written on the same sheet.***

4. ***Please check if you have received complete Question Paper and no page is missing. If so, kindly get new set of Question Paper from the Invigilator.***

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

Q. 1) A Zero Coupon bond

A) Does not earn interest on the money invested.
B) Is issued at a discount and redeemed at par.
C) Earns interest at regular intervals.
D) None of the above. **[2]**

Q. 2) For the previous financial year, the total revenue of a company was Rs. 5000 million while its total purchases were Rs. 3850 million. It had equity of Rs 550 million while its long term debt was Rs 400 million. It owed Rs 50 million to its suppliers while its customers owed it Rs 400 million. The asset utilisation ratio is

A) 5.26%
B) 5%
C) 8.33%
D) 20% **[2]**

Q. 3) Which of the following may result in low margins relative to other firms in the industry?

i) a niche product range
ii) a "low margin high volume" marketing strategy
iii) an attempt to increase market share
iv) poor management/excessive costs

A) II), III) and IV)
B) All the above
C) II) and IV)
D) II) and III) **[2]**

Q. 4) Rahul Ltd has 500,000 issued shares in its share capital. For the previous year, it wanted to distribute Rs 1.1 million to its shareholders out of the retained earnings. It had a sufficient cash balance to do so. However it wanted to use the money partly to buy-back some shares and the balance was to be distributed to shareholders after the buy-back was completed. It wanted to pay a dividend of Rs 2 per share. The current market price of the company's share is Rs. 2 and it would have to pay a 50% premium to the market price for buy-back. How many shares were bought back?

A) 400,000 shares
B) 90,000 shares
C) 125,000 shares
D) None of the above **[2]**

Q. 5) Which of the following does not form the Agency cost?

A) Those incurred in monitoring the managers
B) Those incurred in seeking to influence the actions of managers
C) Those incurred in training the work force
D) Those incurred because the managers do not act in the owners' best interests. **[2]**

Q. 6) Which of the following would have no effect on the real rate of return offered by a listed loan stock?

A) A change in the perceived risk of the company defaulting.
B) A change in the rate of income tax.
C) A change in the rate of inflation.
D) A change in the rate of short term loan. **[2]**

Q. 7) In which of the following transactions is the legal ownership of the goods transferred at the start of the trade?

1) Cash sales
2) Credit sales
3) Hire Purchase
4) Lease

A) 1
B) 1 & 2
C) 1, 2 & 3
D) 1,2,3 & 4 **[2]**

Q. 8) Which of the following statement is true?

A) In general the market value of investment trust is lower than the net present value
B) In general the market value of investment trust is higher than the net present value
C) In general the market value of investment trust is equal to the net present value
D) In general the market value of investment trust is not correlated to the net present value **[2]**

Q. 9) Calculate the weighted average cost of capital:

No of shares issued: 10,000

Issue Price: INR 110 per share

Current Market Price: INR 125 per share

No of Debentures: 20,000

Face value: 100 per debenture

Current Market Price: INR 90 per debenture

Rate of Interest on Debenture: 9% p.a.

Expected return on equity: 15% p.a.

Tax rate: 20%:

A) 9.66%
B) 10.13%
C) 10.87% **[2]**
D) 10.40%

Q. 10) Hero Honda Motor co has a beta of 0.8 relative to the diversified market portfolio. If the risk-free rate of interest over the previous year has been 8%, and the diversified market index has risen 6%, what is the expected increase in the share price?

A) 4.8%
B) 6.40%
C) 12.80%
D) 1.5% **[2]**

Q. 11)

i) What are the differences between a sole trader and a limited company? (2)

ii) Define multi-currency loan and syndicate loan (2)

iii) What are the two primary roles of the stock exchange? (2)

[6]

Q. 12)

i) List four types of medium term finance and four types of short term finance (4)
ii) Which one is more expensive – short term finance or long term finance and why? (2)

[6]

Q. 13) List the ways in which the Reserve Bank of India (RBI) can control the fall of the rupee against the US Dollar. **[4]**

Q. 14) List the various types of securities that are listed on the London stock exchange: **[2]**

Q. 15) A friend has heard something about financial instruments whose value depends on the value of the underlying asset. He is confused and would like to know about such financial instruments.

i) Identify and briefly describe four such instruments. (6)

ii) Explain the two primary uses of such instruments, giving examples (2)

iii) Your friend asks you to explain why people buy these financial instruments when they could directly buy the underlying assets. Briefly explain the reason. (1)

[9]

Q. 16) Adam Ltd, a manufacturing concern, had their financial records destroyed in a fire at their premises. The auditor's working papers were used to construct the statement of financial position on 31st March 2013 and the cashflow statement for the year ended on 31st March 2013 which are as follows:

Cash flow statement for the year ended on 31st March 2013

Particulars	**Amount Rs. Million**	**Amount Rs. Million**
Cash flows from operating activities		525.00
Cash generated from operations	582.50	

Interest paid	(7.50)	
Compensation paid to customers	(50.00)	
Cash flows from investing activities		(315.00)
Purchase of land	(50.00)	
Purchase of plant and machinery	(277.00)	
Sale of investments	12.00	
Cash flows from financing activities		(1,210.00)
Repayment of long term borrowing	(50.00)	
Redemption of preference shares	(100.00)	
Payment made to equity shareholders on buyback	(900.00)	
Dividends paid to equity shareholders	(150.00)	
Dividends paid to preference shareholders	(10.00)	
Net (decrease)/increase in cash and cash equivalents		(1,000.00)
where cash generated from operations is determined as under		
Operating profit	662.50	
Depreciation on plant and machinery and motor vehicles	255.00	
Changes in working capital		
Inventory	(85.00)	
Trade receivables	(50.00)	
Loan to employees	75.00	
Prepaid salary	10.00	
Trade payables	(285.00)	
Cash generated from operations	582.50	

Statement of financial position as at 31st March 2013

Particulars	**Amount Rs Million**	**Amount Rs Million**
ASSETS		
Non-current assets		1,977
Land	250	
Plant and machinery	1,535	
Motor vehicles	192	
Investments		125
Current assets		2,145
Inventory	635	
Trade receivables	1,150	
Loan to employees	50	
Prepaid salary	10	
Cash	300	
Total assets		4,247
EQUITY AND LIABILITIES		
Equity share capital	1,500	
Other reserves	1,100	
Retained earnings	1,322	
Total equity		3,922
Non current liabilities		
Long term borrowings		50
Current liabilities		
Trade payables		275
Total equity and liabilities		4,247

Other information available is as follows:

i) The company was sued by one of its customers 5 years ago. Based on legal opinion, a provision for compensation of Rs. 50 million was made at that time in the Statement of financial position. Finally on 01.05.2012, the company reached a settlement with the aggrieved party and compensation equal to the provision made was paid.

ii) Depreciation on Motor Vehicles was charged @ 20% on the balance as at 31st March 2012. The balance of depreciation charged during the year was attributable to Plant & Machinery.

iii) Investments having a book value of Rs. 10 million were sold for Rs. 12 million

iv) Preference share capital was redeemed at face value.

v) On 1st October 2012, the company bought back 1 share from every 4 shares issued. The premium was paid out of the balance in "Other reserves".

As an intern in the finance department, you have been asked to

a) Calculate the depreciation charged on Plant and machinery and Motor vehicles separately and the Balance of Plant and Machinery as on 31st March 2012. (3)

b) Calculate the balance of Equity share capital and Other reserves as on 31st March 2012. (2)

c) Calculate the profits retained for the year and the balance of Retained earnings as on 31st March 2012 (5)

d) Determine the cash balance as on 31st March 2012. (1)

e) Prepare the Statement of financial position as on 31st March 2012 (10)

[21]

Q. 17) Mr. Singh, a senior actuarial student has provided the following details of his income for the financial year ended on 31st March 2013.

i) Taxable salary from his employer- Rs 19,00,000. His employer has deducted necessary tax on his salary.

ii) Mr Singh visited the UK for an actuarial conference which was followed by a small vacation with his wife. He bought British pounds (GBP) 1,500 in cash for his visit @ Rs.78/GBP. When he returned, he had GBP 687.00 left with him which he sold immediately @ Rs.86.8/GBP

iii) He also visits the race course quite often and bets on the horses. During the last financial year, he won Rs.50,000 on one occasion while he lost Rs.15,000 on all other occasions taken together. The bookie deducted 30% tax and paid him the balance of winnings of Rs.35,000.

iv) He had bought a flat in Pune on 02nd February 2008 at a cost of Rs.10,50,000. He sold the flat on 01st March 2013 for Rs. 27,00,000. He paid the broker a commission of 2% of the sale price. Indexation factors as per the income tax act are as follows:

Financial Year	Indexation Factors
2007-08	551
2008-09	582
2009-10	632
2010-11	711
2011-12	785
2012-13	852

v) He marked exam scripts for the UK actuarial institute for which he received GBP 900.00 after a deduction of 10% withholding tax. The actual proceeds credited in Mr Singh's bank account were Rs. 73,170.

vi) His investments during the financial year 2012-13 which are eligible for tax saving were Rs. 1,00,000. These were NOT disclosed by Mr. Singh to his employer

Other necessary information is as follows:

i) Long term capital gains is chargeable to tax at a flat rate of 20%. Any capital asset held for more than 36 months after its acquisition is considered as a long term capital asset and a gain from the sale of such an asset is considered as a long term capital gain

ii) Tax slabs for the financial year 2012-13 are as follows:

Income	Tax Rate
Up to Rs. 2,00,000	Nil
2,00,001 to 5,00,000	10%
5,00,001 to 10,00,000	20%
10,00,001 and above	30%

iii) India has a Double Taxation Avoidance Agreement (DTAA) with the UK

iv) The rate of tax on betting/gambling is a flat 30%

Mr Singh has requested you to compute the following:

a) His taxable income for the year 2012-13. (6)

b) Net tax now payable by him after allowing for tax already paid/deducted. (6)

[12]

Q. 18) The Government of India is considering launching various infrastructure projects to boost the Indian economy. One of the projects under consideration includes building a super express way between Mumbai and Delhi. The government has called for quotations from various infra companies. You are the project manager at one of the leading infra companies in India. You have been given the task of identification of various risks involved in the project and evaluating financial viability of the project based on the following information:

Length of Highway: 1,800 KMS
Number of Lanes: 3 on each side of the highway
Multiple Entry and Exit points on highway
Time frame for completion of project: 4 years
Government shall pay INR 8,000 crore at the end of the fourth year as a price for building the highway
The expected costs are as follows:
Purchase of Machinery: INR 500 crore

The company has planned to borrow INR 500 crore in Dollars from a US bank at an interest rate of 3% p.a. The exchange rate at the time of receipt of the loan amount is expected to be INR 60 per dollar. The rupee is expected to depreciate by 5% every year thereafter. The interest on the loan is payable only at the end of the year. The loan amount is repayable at the end of four years.

Purchase of raw material:

Year	**Cost of the raw material in crore (at the beginning of the year)**
1	500
2	1,000
3	1,250
4	500

Wages

Year	**Wages in crore (at the beginning of the year)**
1	100
2	120
3	150
4	100

The deprecation on Machinery is 25% p.a. on a straight line basis.

The prevailing tax rate is 30%. As per the income tax Act, infra projects are exempt from tax.

The hurdle rate is 18%.

You are required to do following:

i) List and explain the various risks involved in undertaking the building of the super express way infra project (5)

ii) Calculate the expected cashflows arising from the foreign loan in US Dollar and Indian rupee (4)

iii) Evaluate the financial viability of the project and comment on whether such a project should be undertaken. You need to consider the following (7)

- **a)** Estimate the cashflows.
- **b)** NPV is the sole criterion used for evaluation of the projects

iv) Recalculate the cashflows and NPV if the Rupee strengthens every year by 5% and cost of wages is 120% of the estimates. Comment on the results. (4)

[20]

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