Actuarial Society of India

EXAMINATIONS

23rd May 2006

Subject CT2 – Finance and Financial Reporting

Time allowed: Three Hours (10.30 – 13.30 pm)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. **Do not write your name anywhere on the answer scripts. You have only to write your Candidate's Number on each answer script.**
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
Hand in both your answer scripts and this question paper to the supervisor.

Q.1 Which of the following statements are correct?

I American options are options issued within America.
II American options are options issued on American securities
III American options are options traded within America

A. III only
B. II only
C. all of the above
D. none of the above **[2]**

Q.2 Maxwell company is evaluating two projects A & B. Project A's expected return is 18% whereas expected return from project B is 13.12%. Cost of capital for Maxwell is 11%. Maxwell chose to invest in project B. What may be the most reasonable explanation?

A. Project B is preferred by shareholders.
B. Project B has lower risk than project A.
C. Investment decisions are random and there is no explanation for the same.
D. Project B has higher risk adjusted return compared to project A. **[2]**

Q.3 Which of the following doesn't apply to limited companies?

A. Must have a memorandum of association.
B. Must have an articles of association.
C. Legal identity is separate from the owners of the companies
D. Owners have unlimited liability **[2]**

Q.4 Double taxation relief means that:

A. No tax will be applicable on income if some tax is deducted at source (TDS).
B. Tax will be only applicable on the value added by the enterprise i.e. after deducting value of all inputs.
C. Domestic tax will be offset by the amount of tax paid overseas of that income.
D. Throughout the value chain, any income or value will be taxed only once. **[2]**

Q.5 Stock index futures trades are settled by delivering :

A. Cash
B. Portfolio of stocks underlying the index
C. Stock index
D. Units of index based mutual fund. **[2]**

Q.6 Pick the most appropriate list in decreasing order of financial leverage:

A. Bank, IT Company, Steel Company
B. Steel Company , Bank, IT Company
C. Bank, Steel Company , IT Company
D. IT Company, Steel Company , Bank **[2]**

Q.7 Maxwell ltd. Common stock beta is 1.2 and the debt/equity ratio is 0.7. The corporation tax rate is 30 %. If risk free return is 6% and market risk premium is 5% then what is the required rate of return on total assets of the company?

A. 12.20%
B. 15.73%
C. 9.83%
D. 9.24% **[2]**

Q.8 Which of the following is most conservative definition of asset cover?

A. $\dfrac{\text{Total assets - Current liabilities - intangible assets}}{\text{loan capital + (all prior charges)}}$

B. (Total assets – current liabilities- intangible assets) / balance sheet amount of loan capital

C. Market value of total assets/ market value of total loan

D. (Total assets – current liabilities – intangible assets) / (market value of loan capital + all prior charges) **[2]**

Q.9 Depreciation provided by a company will affect:

I Profit and loss account
II Balance sheet
III Market value of assets

A. I only
B. I and II only
C. all of the above
D none of the above **[2]**

Q.10 A project has the following cash flow :

Time	0	1	2
Cash flows	-100	20	230

Certainty equivalent factor for first inflow is 0.75 and for second is 0.50. If the uniform discount rate is 15% then what is the NPV of the project?

A. 0.00
B. 100.00
C. 107.61
D. 91.30 **[2]**

Q.11 Describe the characteristics of the following financial instruments, from an issuer's point of view of:

Eurobonds **(1)**
preference shares **(1)**
convertible unsecured loan stocks **(1)**
convertible preference shares **(1)**
warrants **(1)**
floating rate notes **(1)**
[6]

Q.12 Explain why a company would seek a Stock Exchange listing **[8]**

Q.13 XYZ Plc is planning an expansion and requires Rs 5,00,000,000 in order to do so. The Finance manager needs to decide whether to finance this by debt or equity. Discuss the factors they should take into account. **[8]**

Q.14 Discuss the proposition "ratio analysis can show what's hidden in financial statements". **[4]**

Q.15 Explain how the Reserve Bank of India provides liquidity in the money markets. **[4]**

Q.16 Describe the main features of investment banks and discuss their influence on the financial markets. **[6]**

Q.17 Explain the concept of agency theory and its impact on the cost of financing of a company. **[4]**

Q.18 **a)** Assume a firm expects a 9% per year increase in wage rates and in the price level and a 10% time value factor (cost of borrowing). A piece of equipment costing Rs. 331,210 will save 5000 hours of labour per year. In the first year, each hour is worth Rs. 20 The life of the equipment is four years.

Should the equipment be purchased? There are zero taxes. (4)

b) Assume the 9% increase in wage rates still applies to the firm, but there is a 15% inflation in the economy. The cost of borrowing is still 10%. The firm wants to translate future rupees into current purchasing power and makes the following calculations.

year	**Real Expected Cashflows**	**Discounted value of real cashflows**	**PV of cashflows**
1	100,000	$100{,}000 * 1.10^{-1}$	90,909
2	$109{,}000 * 1.15^{-1}$	$94{,}783 * 1.10^{-2}$	78,333
3	$118{,}810 * 1.15^{-2}$	$89{,}837 * 1.10^{-3}$	67,496
4	$129{,}503 * 1.15^{-3}$	$85{,}150 * 1.10^{-4}$	58,159
Total			**294,897**

The NPV = -331,210 + 294,897 = -36,313. The investment was rejected. Evaluate. (5)

c) Calculate internal rate of return for the project. (accurate up to $1/10^{th}$ of one percent) (4)

d) What are the advantages and disadvantages of using IRR for project evaluation (4)

[17]

Q.19 Prepare fire revenue account and profit and loss account for the year ended 31st March 2005 and the Balance Sheet as on that date.

The following figures were taken from the books of Fire India Insurance Co. Ltd., which is in fire underwriting business:

Fire Fund (as on 1/4/2004)	930,000	Commission on direct business	299,777
General reserve	450,000	Commission on reinsurance accepted	60,038
Investments	3,075,000	Outstanding Premium on direct business	22,300
Premium	2,701,533	Expenses on fire account	431,947
Claims paid	602,815	Audit Fees	36,000
Share capital	900,000	Rates and Taxes	5,804
		Rents	67,500
P & L Account (cr.)	75,000	Income from investments	153,000
Re-insurance Premium on reinsurance ceded	112,525	Sundry creditors	22,500
Claims recovered from re-insures	21,119	Cash in hand and Bank balances	182,462
Commission on reinsurance ceded	48,016		

You have given following further information's for your reference:

a) Expenses of management include survey fees and legal expenses of Rs. 36,000 and Rs. 20,000 relating to claims.
b) Claims intimated but not paid on 31st March, 2005, Rs. 104,000
c) Income tax to be provided at 40%
d) Transfer of Rs. 20,000 to be made from current profit to General reserve
e) The company maintains a reserve, excluding additional reserve for unexpired risk @ 40% of net premium income.

[23]

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