# Actuarial Society of India <br> EXAMINATIONS 

$25^{\text {th }}$ May 2006
Subject CA11 - Assets
Time allowed: Three Hours (10.15* - $\mathbf{1 . 3 0} \mathbf{~ p m}$ )
INSTRUCTIONS TO THE CANDIDATE

1. You have 15 minutes at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only but notes may be made. You then have three hours to complete the paper.
2. You must not start writing your answers until instructed to do so by the supervisor.
3. The answers are not expected to be any country or jurisdiction specific. However, if examples/illustrations are required for any answer, the country or jurisdiction from which they are drawn should be mentioned.
4. Mark allocations are shown in brackets.
5. Attempt all questions, beginning your answer to each question on a separate sheet.
6. Fasten your answer sheets together in numerical order of questions. This, you may complete immediately after expiry of the examination time.

## 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 script and this question paper to the supervisor.

Q1 You are working in an asset management company. A cruise company has offered your asset management company an opportunity to buy its new cruise liner that is due to launch next month. Outline the characteristics and risks of this investment.

Q2) An Indian bank is considering launching its first international operation in Dubai. The bank has estimated its potential cashflows in today's monetary values depending on the degree of success as follows:

| Scenario | Good | Average | Poor |
| :--- | :---: | :---: | :---: |
| Probability <br> scenario of | $30 \%$ | $45 \%$ | $25 \%$ |
| Year / Units |  |  |  |
| 1 | -12.0 | -12.0 | -12.0 |
| 2 | 6.2 | 3.6 | 1.9 |
| 3 | 7.9 | 5.2 | 2.0 |
| 4 | 12.5 | 7.9 | 0.9 |

(i) Describe how to determine the real risk discount rate to be used to value this project.(No estimate of the rate is required)
(ii) Calculate the net present value of the project under each scenario and the
expected net present value of the project using a real risk discount rate of $12 \%$. State any assumptions that you make.
(iii) Comment on whether the bank should proceed with the project including any further information that you require.

Q3) Your former university has a charitable fund that it uses to assist students from disadvantaged backgrounds. Due to your investment expertise, you have been asked to write a review of the fund's investment strategy. Outline the main points of your review.

Q4)
(i) List reasons why an institutional investor may hold a large proportion of its assets in money market investments.
(ii) Explain why a borrower might prefer to issue a Yankee bond instead of a domestic bond.
(iii) Outline which dealing system a fund manager who wishes to value their fund at current market value would prefer. Give reasons for your answer.
(iv) Define in words and give a formula of volatility for fixed-interest bonds. State what volatility is also known as.

Q5)
(i) Outline what aspects regulations for collective investment vehicles typically cover.
(ii) A life insurer offers unit-linked plans that are based on the performance of an open ended investment company (OEIC). Discuss the advantages and disadvantages for an individual investing in the life insurer's unit-linked plan instead of buying shares. (lgnore any insurance benefit)
(2)

Q6) Explain how economic factors influence bond yields.
Q7)
(i) Using the projected dividend income and equity dividend yield to generate the projected price index and determine the expected force of inflation for each year.

| Date | Dividend Income <br> (Rs.) | Equity <br> $(\%)$ | Dividend Yield |
| :--- | :--- | :--- | :--- |
| $01 / 04 / 2007$ | 50.0 | $8.0 \%$ |  |
| $01 / 04 / 2008$ | 51.5 | $7.9 \%$ |  |
| $01 / 04 / 2009$ | 52.0 | $7.8 \%$ |  |

(ii) Outline why and how models usually exclude the possibility of negative nominal interest rates.

Q8) You have been asked to write answers to the following 'Frequently Asked Questions' regarding personal investment for a Sunday newspaper.
(i) "I have just started my first job having recently finished my MBA. What should I consider when making any personal investment?"
(ii) "My wife and I are going to retire shortly and expect to receive a considerable lump-sum through my leave-encashment scheme. What do we need to consider when investing this money?"

Q9) You are responsible for corporate lending at a bank. One of your clients is an
(9) international airline that has borrowed heavily. Due to rising oil prices the airline is struggling to cover its debt repayments. In addition the airline requires further capital to buy new planes to maintain its market share. The airline has offered to swap some of its loan for equity.

You need to make a recommendation to the bank's Board on how to proceed.
(i) Outline what factors you would consider in your recommendation.
(ii) Discuss what further information you would require before making a
recommendation.
Q10) An investor has a leasehold interest in an office property. The outstanding term of the lease is 35 years, and the current rent passing from the sub-lease is Rs. 80,000 per annum payable quarterly in advance. The rack rent is currently Rs. 95,000 per annum. Assuming that there are upward only rent reviews every 5 years under the sub-lease (the first review in 5 years time), and that the rack rents will increase at
$6 \%$ per annum, value the leasehold at a discount rate of $12 \%$. Ignore expenses and sub-lease (the first review in 5 years time), and that the rack rents will increase at
$6 \%$ per annum, value the leasehold at a discount rate of $12 \%$. Ignore expenses and ground rent.

