INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

4 October 2012 (pm)

Subject SA6 – Investment Specialist Applications

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*

2. *You have 15 minutes before 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.*

3. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*

4. *Mark allocations are shown in brackets.*

5. *Attempt all three questions, beginning your answer to each question on a separate sheet.*

6. *Candidates should show calculations where this is appropriate.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.

1 You are the Chief Investment Officer of a £5bn pension fund sponsored by a UK power company with interests in distribution and generation. The fund has a target level of investment in infrastructure and property of 15%, and currently has a 5% holding in pooled property funds and a 5% holding in an infrastructure real estate investment trust ("REIT").

(i) Explain why the fund might have chosen to invest in the infrastructure REIT rather than some other infrastructure vehicle or a broader based REIT. [8]

The Head of Corporate Finance and the Finance Director of the sponsor company have approached you with an opportunity to co-invest in a £500m wind farm project as a 30% partner, alongside their planned 30% shareholding. The other 40% shareholder is a large European manufacturing business who will supply the majority of the plant and turbine components. Shareholders will provide 50% of the development capital and a syndicate of banks will lend 50% under a 10 year amortising loan, secured on the assets and 75 year development rights.

(ii) Give reasons why the Head of Corporate Finance and the Finance Director may feel it desirable to bring in the pension fund as a partner in this project. [6]

(iii) Outline the process that should be followed to establish whether the investment is appropriate for the pension fund. [16]

(iv) Explain how the answer to part (iii) would change if you were the Chief Investment Officer of a £1.5bn pension fund sponsored by a UK based infrastructure services business. [6]
[Total 36]

2 A new accounting standard is being introduced that values a company’s pension liabilities using a discount rate equivalent to the yield on long dated AAA bonds. The sponsor of a large defined benefit pension plan that is closed to new entrants and future accrual is considering how to manage the resulting deficit. The sponsor has asked the trustees of the plan to look at options available for the assets in respect of the liability for current pensions in payment.

You have been appointed by the trustees to advise on whether to keep these liabilities within the pension plan and so expose the employer's balance sheet or whether to transfer them to an insurance company.

(i) Discuss the factors that need to be considered in making your recommendation. [18]

It has been decided to retain the liability for current pensions in payment in the pension plan. The trustees now wish to evaluate various strategies to manage the assets backing these liabilities. The trustees aim to grant increases to pensioners equal to consumer price inflation (CPI) over rolling three year periods.

(ii) Explain the concept of cash flow matching. [4]

(iii) Discuss the practicalities of implementing a cash flow matching strategy using either bonds or swaps. [8]

(iv) Assess the suitability of each of the following investment strategies for managing the funding level in respect of the pensioner liability:

(a) A balanced fund with 60% equity exposure.

(b) An absolute return style portfolio.

(c) A strategy where all the guaranteed cash flows are matched.

(d) A strategy where all the guaranteed cash flows and future inflation-linked increases are matched.

(e) A strategy where the guaranteed cash flows are only matched partially. [18]

[Total 48]

3 In a large developed country, Actuarica, the government began implementing economic policies which were aimed at stimulating economic growth by the richer elements of society – based on the theory that the wealth created would "trickle down" to the poorer elements of society and make everybody better off.

Thirty years later, the policy has been unsuccessful and resulted in below potential economic growth over the period. The richer people have been made better off, but the poorer people have fared significantly less well, which has resulted in a significant increase in income inequality in the country. Before the policy was introduced, the average CEO earned about 40 times the average industrial salary; this ratio has recently increased to 400 times.

This has resulted in large demonstrations throughout the country, with many government buildings and grounds being "occupied" by protesters. These have been followed by elections and victory for the political party which advocated reversing the changes made in the previous 30 years.

Discuss the likely impact that these events would have on pension funds and life assurance companies in Actuarica. [16]

END OF PAPER