EXAMINATION

6 October 2010 (pm)

Subject SA4 — Pensions and other Benefits 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 The sponsoring employer of a defined benefit pension scheme that is not contracted out is considering making a one-off offer to pensioner and deferred pensioner members of the scheme. Currently pensioners of the scheme receive annual increases at the rate of inflation capped at 4% per annum on the element of their pension relating to pre-April 1997 service.

The employer is proposing to offer the pensioners and deferred pensioners the choice of forfeiting future increases in payment on the pre-April 1997 element of pension in return for an enhancement to their pension. Under the scheme rules, the employer would need the trustees' permission to implement this change.

(i) Suggest reasons why the employer has proposed this offer. [7]

(ii) Outline the concerns that the trustees might have about the offer and the actions that the employer and the trustees should take to address these concerns. [9]

(iii) Discuss the factors that the members should consider in deciding whether or not to accept this offer. [8]
[Total 24]

2 The following is a summary of the results of a recent actuarial valuation of a UK final salary pension scheme:

Liabilities (Projected Unit Method)

Pensions in payment	£80m
Deferred pensioners	£50m
Active members	£30m
Assets	£140m

Standard Contribution Rate is 25% of Pensionable Salaries (inclusive of 5% member contributions).

Total Pensionable Salaries £10m per annum.

Financial Assumptions	*per annum*
Inflation	3.0%
Discount Rate	6.0% / 4.0% pre and post-retirement respectively
Pension Increases	2.5%
Salary Increases	4.5%

Contributions for the Recovery Plan are assumed to achieve a return of 6% per annum.

Demographic Assumptions

No pre-retirement decrements.

Post-retirement mortality in line with current tables for pension schemes, allowing for expected future improvements in longevity.

The trustees have proposed a Recovery Plan based on fixed monetary deficit contributions for ten years.

(i) Calculate the sponsor's total contribution requirement for each of the next five years, stating any significant assumptions you make. [5]

The sponsor indicates that this level is affordable but a further 50% increase in the monetary amount would endanger the viability of the business.

(ii) Calculate the increase in deficit that would trigger an immediate 50% rise in employer contributions, assuming no changes in assumptions. [2]

(iii) Identify the possible sources of such a loss, and suggest with reasons which is the most likely to occur. [5]

(iv) Estimate the reduction in discount rates that would trigger a 50% increase in the sponsor's immediate monetary contributions, assuming the same reduction pre- and post-retirement. [8]

(v) Discuss how the trustees might use the results of (ii) to (iv) in reviewing the financing of the scheme. [10]

[Total 30]

3 A company sponsors a defined benefit pension scheme in the UK which provides a pension on retirement that increases annually in line with inflation. The scheme is open to new entrants. The most recently assessed Technical Provisions were as follows:

Active members:	£30m
Deferred members:	£25m
Pensions in payment:	£22m
Expense Reserve:	£3m
Total Technical Provisions:	£80m
Assets:	£60m
Deficit:	£20m

The trustees' investment adviser is helping the trustees revise their Statement of Investment Principles. She has asked the Scheme Actuary to provide the cashflows of the scheme for the next ten years.

(i) Define the Statement of Investment Principles and describe its key features. [4]

(ii) List the main sources of cashflow that might arise over the next ten years. [5]

(iii) Discuss how the Scheme Actuary would determine the cashflows required by the investment adviser, including any caveats or qualifications that would need to be given with the results. [11]

(iv) Explain how the principles used to set the assumptions for assessing the Technical Provisions might differ from those used to assess the cashflows provided to the investment adviser. [4]

Current key market data is as follows:

Over 15 year gilt yield:	4% p.a.
Over 15 year AA corporate bond yield:	6% p.a.
Over 15 year index linked gilt yield:	1.5% p.a.
RPI:	0% p.a.

(v) Explain how the following assumptions might differ between the cashflow projections and the assessment of Technical Provisions:

(a) investment return
(b) pension increases
(c) administration fees

[8]

The trustees have asked the Scheme Actuary to liaise with the investment adviser to suggest how the uncertainty in the cashflows might be reduced.

(vi) Discuss the strategies which might be employed to reduce the uncertainty, and indicate which might be the most appropriate to employ. [10]

The scheme is to close future benefit accrual.

(vii) Discuss how this change might alter:

(a) the cashflow projections
(b) the scheme's investment strategy

[4]
[Total 46]

END OF PAPER