EXAMINATION

6 September 2005 (am)

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 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.*

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 both 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.

1 You have recently been appointed as the Scheme Actuary to a UK defined benefit pension scheme that is closed to new entrants. Active members continue to accrue benefits. You have just completed a formal actuarial valuation as at 31 March 2005, a summary of which is below.

Data

Category	*Number*	*Total Pensionable Salary / Pension*	*Liability Weighted Average Age*
Active members	450	£18.0m p.a	41
Deferred pensioners	750	£2.5m p.a (revalued to 31/3/05)	44
Current pensioners	200	£1.0m p.a	63

The membership is predominantly male.

Assumptions (ongoing funding basis)

Inflation:	2.75% p.a
Discount rate:	6.75% p.a. pre-retirement, 5.00% p.a. post-retirement
Salary increases:	4.50% p.a.
LPI pension increases:	2.75% p.a.
Post-retirement mortality:	PMA92C20 (rated down 2 years for non-pensioners)

Benefits

Scheme is not contracted-out of the State Second-Tier Pension arrangements.
Normal Retirement Age is 60.

LPI pension increases are applied to the full pension in payment.

Results (ongoing funding basis)

Liabilities:		Assets at market value:	
Active members	£ 35m	UK equities	£45m
Deferred pensioners	£ 35m	UK gilts	£30m
Current pensioners	£ 15m		
Total	£ 85m		£75m
Deficit	£ 10m		

Standard contribution rate: 25% of Pensionable Salaries (Projected Unit Method) (including member contributions at 5% of Pensionable Salary)

(i) Estimate the debt on the employer of the scheme, on the basis that the scheme were discontinued at the valuation date and that the employer is not insolvent, stating any further assumptions or approximations you make. [15]

Assume that the following basis is suitable for assessing the cost of purchasing deferred and immediate annuities.

Discount Rate	4.50% p.a
Inflation/LPI	3.00% p.a
Mortality	PMA92C20 rated down 4 years for all members
Expenses	1% of the total purchase price

(ii) An inexperienced Trustee asks you why the discontinuance liabilities in (i) are different to the ongoing liabilities. Outline the reasons, covering the following areas:

- the benefits provided were the scheme to discontinue
- the options for providing members' entitlements
- why the financial and demographic assumptions used are different
- any limitations to your estimates

[10]

(iii) Assuming active members continue to accrue benefits, and that deficits are to be amortised by fixed annual amounts, estimate the average annual employer contributions required to restore the scheme within 10 years to

(a) 100% funded on the ongoing assumptions
(b) 90% funded on the basis used in (i)

[10]

(iv) The trust deed and rules state "The Employer must pay such contributions that the Trustees decide are necessary to provide the benefits, acting on the advice of the Scheme Actuary". Outline the issues the Trustees should consider and the further information they might seek in making their decision on the contributions to be paid. [25]

(v) According to the statement of investment principles for the scheme, which was established at the date of the previous valuation, the Trustees have a "transition programme" in place and the relevant part of the statement says:

"The scheme is 80% funded on a buyout basis. The funding position will be monitored regularly and when the coverage improves by 5%, there will be a switch of 15% of the assets from UK equities to UK gilts. In this way, it is expected that a 100% UK gilts policy will be in place once the scheme is 100% funded on a buyout basis."

The trustees have asked for your comments on the appropriateness of this transition programme. Outline the points that you would consider. [15]

[Total 75]

2 (i) State the main aim of the Pensions Protection Fund [1]

(ii) Outline the pension benefits that will be provided. [3]

(iii) Discuss the key features and risks of introducing the Pensions Protection Fund for the following:

- Members
- Scheme Sponsors
- Scheme Trustees [9]

(iv) Discuss the factors that should be considered in setting a risk based levy to meet future claims on the Pensions Protection Fund. [8]

(v) Describe two other possible methods of protecting members' benefits on wind up. [4]

[Total 25]

END OF PAPER