EXAMINATION

14 April 2008 (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 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 all 3 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 actuarial adviser to a medium sized, privately owned, UK company (Company A) that is in negotiation with an investment company (Company B) that is considering the purchase of Company A. Company A is valued at approximately £10m which includes an assessment of its pension liabilities. Company A employs 100 employees.

Some of the employees are members of the Company A Pension Plan ("the Plan"), a defined benefit arrangement which is not contracted out. The Plan is closed to new entrants, offering 1/60th of final salary for each year of service with the following membership:

Category of Members	*Number of Members*	*Liabilities at 2007 Valuation*
Active	40	£12m
Deferred	40	£8m
Pensioner	20	Fully insured (£5m)
Total Liability (excluding pensioners)		£20m
Value of Assets (excluding pensioners)		£16m

The 2007 valuation has been carried out on a basis that is consistent with the relevant guidance for a full triennial valuation allowing for the current investment strategy which is 100% equities. The company accounts show an alternative assessment of the liability based on the statutory requirements for disclosure in company accounts, This shows a deficit of approximately £7million as at the same date as the ongoing valuation.

The remainder of the employees are members of a Stakeholder pension arrangement with an employer contribution of 5% of basic salary.

Company B is concerned about the financial and management risks attaching to the purchase of a company that has a defined benefit pension arrangement. The directors of Company A are therefore worried that this might have a significant impact on the amount that Company B will be prepared to pay for the business of Company A and have asked for your advice.

(i) Outline the main pension risks and uncertainties that might be of concern to Company B. [4]

(ii) The major shareholder of Company A, who is also its Managing Director, has suggested that all of the non-pensioner liabilities of the Plan be transferred to the Stakeholder pension arrangement. Set out the barriers that there may be to achieving such a solution. [5]

Having discussed the potential problems with you, the Managing Director has now proposed that accrual be ceased for all active members of the Plan, and they be offered transfer values to the Stakeholder arrangement.

(iii) Describe how transfer values would be calculated in normal circumstances, explaining the approach to setting the bases that might be used. [5]

(iv) Discuss the likelihood that members may accept the offer of such a transfer. [3]

The Managing Director has proposed that members be offered an enhancement of 10% to their transfer values if they transfer to the new arrangement within a three month period. You have been asked to comment on this suggestion and to propose amendments to maximise the number of members transferring to the Stakeholder arrangement.

(v) Outline the practical issues that need to be considered. [6]

(vi) Describe the amendments you might propose with reasons, explaining the likely costs to the Company and impact on the value of Company A. [7]
[Total 30]

2 You have just been appointed as Scheme Actuary to a pension scheme for which a valuation is currently being carried out. The valuation date is 1 January 2008, and the previous valuation was carried out as at 1 January 2007.

Your employer has set up a centralised valuation processing service. You instruct the centre as to the benefits to be valued and the financial assumptions to be used. The post-retirement mortality assumptions are to be the same as used for the 2007 valuation, there is no allowance for decrements prior to normal pension age and no allowance is to be made for commutation. The centre processes the membership data and liability calculations. The deadline for delivering initial results to the Trustees is imminent and the centre has just provided you with the following summary:

Membership data (2007 figures in brackets)

	Active Members	*Deferred Pensioners*	*Current Pensioners*
Number	200 (250)	330 (300)	200 (190)
Basic Salary /Pension p.a.	£8.4m (£10.0m)	£1.7m (£1.5m)[1]	£1.2m (£1.1m)
Average age[2]	48 (47)	44 (42)	65 (65)
Average service[2] (years)	15 (14)	n/a	n/a

[1] Includes revaluations from date of leaving service to date of valuation
[2] Weighted by accrued pension at date of valuation

Assumptions

	1 January 2007 per annum	*1 January 2008 per annum*
Interest pre/post retirement	6.50%/5.00%	4.75%/4.75%
Salary increases	4.50%	4.00%
Inflation	3.00%	3.00%
Pension increases	3.00%	3.00%

Sample Male Annuities at age 65 using 2007 assumptions

Year of Birth	*Single Life Annuity*	*Reversionary Annuity*
1940	17.38	5.40
1950	17.83	5.25
1960	18.17	5.13
1970	18.43	5.04

Liabilities calculated

	2007 Valuation	*2008 Valuation on 2007 Assumptions*	*2008 Valuation on 2008 Assumptions*
Actives	£34.0m	£31.4m	£43.2m
Deferreds	£14.7m	£17.6m	£26.2m
Pensioners	£23.5m	£25.5m	£26.3m
Total	£72.2m	£74.5m	£95.7m

Benefits valued

Normal Pension Age 65
Benefit formula 1/60 of Basic Salary for each year of Pensionable Service
Dependant's pension 50% of member's pension before commutation
Pension increases 5% LPI on all benefits
Scheme is not contracted-out

(i) Estimate the 2008 liabilities on the 2007 assumptions based on the information provided and assuming all the membership is male:

(a) using only the membership data as at 1 January 2008

(b) using the 2007 valuation results adjusted for the changes in membership

[11]

(ii) Comment on your results in (i). [3]

(iii) Explain the other checks you would normally carry out to confirm the liability valuation is accurate, stating other information you would need in order to do so. [10]

(iv) Estimate the results on the 2008 assumptions, assuming the results provided by the processing centre on the 2007 assumptions are correct. [4]

(v) Suggest, with reasons, what error you think the processing centre may have made in calculating the liabilities on the 2008 assumptions. [3]

(vi) Explain the further information you might need to estimate the PPF Section 179 liabilities as at 1 January 2008. [4]

[Total 35]

3 You are the actuarial adviser to Company X who operate a defined benefit final salary pension scheme. Company X is considering selling part of its business as an asset transfer to its management, who have set up NewcoY for this purpose.

(i) List the ways in which the accrued benefits of NewcoY's prospective employees could be handled under the terms of the sale agreement. [4]

(ii) A bulk transfer payment is to be made from Company X's scheme to a new scheme established by NewcoY. You have been supplied with the relevant membership data. Discuss the further information that might be required in order for you to calculate the amount of the transfer payment. [9]

(iii) Set out Company X's requirements in any negotiation relating to the methodology to be used to determine the size of the transfer payment, comparing these with the requirements of NewcoY. [5]

(iv) Once the sale agreement has been finalised, describe the advice that the trustees of Company X's scheme will require in order to give effect to the provisions of the sale agreement. [6]

(v) The Trustees of Company X's scheme have suggested that the size of any bulk transfer payment should be influenced by whether the scheme to be established by NewcoY is defined benefit or defined contribution in nature. Discuss this suggestion. [5]

(vi) Outline the relevant factors which might influence the natural market price for the transfer of defined benefit liabilities from one scheme sponsor to another. [6]

[Total 35]

END OF PAPER