EXAMINATION

1 October 2007 (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 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.

1 A UK employer operates a defined benefit pension scheme which is closed to future accrual. You have just undertaken an actuarial valuation which has shown that the scheme is 100% funded on a long term ongoing funding basis. However, on a solvency basis (ie assuming the liabilities are secured in the insurance market) the deficit is bigger than the market capitalisation of the sponsoring employer.

The Finance Director is concerned that the scheme represents a significant business risk. He has asked for your assessment of the specific potential risk areas which could create a need for the company to put additional funding into the scheme and for suggestions on how these risks could be mitigated.

Discuss four key risk areas, and suggest ways these could be mitigated. [20]

2 You are the Scheme Actuary to a UK occupational pension scheme. You also advise the sponsoring employer. The following is a summary of the relevant provisions of the pension scheme:

	Defined Benefit (DB) section	*Defined Contribution (DC) section*
Eligibility	Closed to new members with effect from 31 December 2001. Accrual continues for members present at 31 December 2001.	Open to all employees joining on or after 1 January 2002.
Member contribution rate	5% of salary	4% of salary
Company contribution rate	17% of salary (subject to actuarial review)	4% of salary

The company has recently hired a new finance director (FD) who has asked for some further information relating to the costs of the pension scheme to the company, as he is concerned about the company's revenue forecasts.

The company accounts for the year ending 31 December 2006 are in the process of being compiled, but in advance of the full FRS17 disclosure the FD has asked you to produce an estimate of the FRS17 position.

The following is an extract from the 2005 FRS17 disclosures at 31 December 2005:

	DB section	*DC section*
Market value of assets	£m	£m
Equities	45.7	9.7
Bonds/gilts	18.1	0.0
Total Assets	**63.8**	**9.7**
Present value of liabilities	**83.5**	**9.7**
Balance sheet deficit	**19.7**	**0.0**
Service cost	2.4	0.8
Past service cost	0.0	0.0
Total operating charge	**2.4**	**0.8**
Expected return on assets	3.2	0.6
Interest on liabilities	(3.5)	(0.6)
Other finance income	**(0.3)**	**Nil**
Actual asset return greater than expected	1.9	0.2
Experience gains/(losses) on liabilities	0.8	0.0
Change in assumptions for valuing liabilities	(2.5)	(0.2)
STRGL	**0.2**	**Nil**

Assumptions adopted at 31 December 2005	*% per annum*
Discount rate	4.75
Expected long term salary inflation	4.0
Expected investment return on bonds/gilts	4.5
Expected investment return on equities	7.5

Additional information during the calendar year 2006:

- bond and gilt yields remained very stable, but equities on average returned 10.5% over the year
- company contributions paid were: DB section £1.7m, DC section £0.8m
- benefit outgo (all from DB section): £1.2m

(i) Estimate from the information given the following FRS17 components for the scheme as a whole, for the year ending 31 December 2006. State any further assumptions you make.

(a) Deficit on balance sheet
(b) Operating charge
(c) Finance income
(d) STRGL [18]

(ii) Comment on your results in part (i). [2]

(iii) The FD has just confirmed the new company wide salary review effective 1 January 2007, on which the end year 2006 FRS17 disclosures would be based. The FD states that "the average salary increase was 2%" rather than an assumed 4%. Assuming that two thirds of the total scheme liability value at 31 December 2005 relates to employed members, recalculate the figures in (i) (a) to (d), stating any further caveats attached to these reworked numbers before giving them to the FD. [6]

(iv) The company is considering a stock market listing and as a result would have to disclose its pension costs under IAS19. Set out the principal differences between disclosures under FRS17 and IAS19. [3]

The latest funding valuation of the DB section of the scheme was carried out with an effective date of 31 December 2005. The following investment returns were used in discounting the liabilities.

	Past service accrued liabilities	*Future service liabilities*
Pre-retirement investment return	6.25% per annum	6.75% per annum
Post-retirement investment return	4.25% per annum	4.75% per annum

The interest rate used in the recovery plan is also 6.75% per annum.

(v) The FD has written to ask you to explain the economic assumptions for the funding valuation. Outline the points you would make in your response in relation to the following:

(a) Why the investment return is different pre and post retirement.

(b) Why the investment return is different for past and future liabilities.

(c) Why the returns are lower than the 7.5% per annum equity return used in the 2005 FRS17 disclosure at the same date.

[8]
[Total 37]

3 You are the actuarial adviser to a small privately owned UK company (Company A). It is in negotiation with another, much larger, well capitalised UK company (Company B) to purchase XYZ Limited, a wholly owned subsidiary of Company B, which has significant bank funding. XYZ Limited employs 150 staff, all of whom are members of the Company B Pension Plan, a not contracted-out defined benefit arrangement offering 1/60th of final salary for each year of service with the following membership:

Category of Members	*Number of Members*	*Technical Provisions at 2006 Valuation £ million*
Active	2,000	100
Deferred	3,500	90
Pensioner	1,000	80
Total Liability		270
Value of Assets		227

If the sale goes ahead, Company A propose to set up a new defined benefit arrangement to provide the same benefits as the employees of XYZ Limited enjoyed as members of the Company B Pension Plan. It is proposed that you will be the Scheme Actuary to that new arrangement.

(i) Company A have asked you to explain to them the roles and responsibilities of all parties in the sale and purchase of XYZ Limited who may have an interest in the pension aspects of the deal. Give brief details of the key parties involved, and summarise their interests. [9]

You have been asked to write a report on the role of trustees as none of Company B trustees will be involved with Company A.

Set out the key points you would cover in such a report, in particular detailing:

(ii) The general areas of knowledge and understanding that the role of a trustee requires, and [4]

(iii) The trustees' main objectives in managing a scheme and the actions that need to be taken to meet those objectives. [8]

Having read your report, the proposed company trustees are concerned about how they fulfil their duties under the new Scheme Specific Funding Requirements. In particular, they are considering how the funding plan for the new scheme might differ from that for the Company B Pension Plan.

(iv) Describe the key measures to determine the sponsor covenant that the trustees will need to consider, and how they can quantify these measures. [12]

(v) Outline how the results of these measures might alter the approach to agreeing a funding plan with Company A compared to the current funding plan for the Company B Pension Plan. [10]

[Total 43]

END OF PAPER