INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

22 April 2013 (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 before the start of the examination in which to read the question. 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 answer 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 from the approved list.

1 XYZ plc operates a UK defined benefit pension scheme that is currently closed to new entrants but open to accrual in relation to existing active members. It is a large scheme where experience data is generally statistically significant over an intervaluation period.

Under the scheme rules, the benefit offered is a pension of 1/60th of final pensionable pay for each complete year of service, payable from age 65. Once in payment, the pension increases at the rate of consumer price inflation on each anniversary of the commencement date. A spouse's pension equal to 50% of the member's pension is payable on death after retirement.

The scheme's trustees have asked the Scheme Actuary to calculate the value of the scheme liabilities on a "best estimate" basis.

(i) Identify the key assumptions that the Scheme Actuary will need to make for the purpose of this calculation, and explain the relevance of each assumption to this valuation. [8]

(ii) Describe how the Scheme Actuary might determine each of these "best estimate" assumptions. [10]

The trustees are considering the relationship between the Technical Provisions of the scheme and the value of the liabilities measured on a "best estimate" basis. Their view is that the Technical Provisions should incorporate a margin for risk so that the scheme, when fully funded, will have sufficient assets to cover the "best estimate" value of liabilities in 99% of possible scenarios at all times over the three-year period following the calculation.

(iii) Discuss the methodology and any additional assumptions that the Scheme Actuary will need to make in order to calculate the Technical Provisions using this approach. [6]

(iv) Discuss the suitability of this approach in providing security for the benefits payable under the scheme. [8]

As part of the next valuation, the Scheme Actuary has determined the additional assets that would be required in order to settle the entirety of the accrued liabilities with an insurance company (the "buy-out deficit"). During a meeting between the trustees and XYZ plc, it is noted that XYZ plc's market capitalisation is more than 10 times the buy-out deficit.

The Finance Director of XYZ has argued that a pension scheme balance sheet which properly reflected the company's covenant would show that the scheme would be in surplus even if there were no assets in the scheme. The trustees have asked the Scheme Actuary to comment on this argument.

(v) Discuss the points that the Scheme Actuary should make to the trustees. Amongst other things, your answer should consider how the strength of the employer covenant could be allowed for in the approach to be taken to calculate the Technical Provisions for the scheme. [12]

[Total 44]

2 (i) List the six principles set out in the Accounting Standards Board best practice guidelines on providing disclosures for defined benefit schemes. [3]

(ii) Explain the following terms in relation to figures prepared by an actuary for disclosing pension costs in company accounts:

- Settlement
- Curtailment
- Past Service Cost.

[6]

A triennial valuation of a medium sized defined benefit scheme was recently completed; it showed a deficit of £16m. A recovery plan has been agreed between the scheme's trustees and the sponsoring employer, whereby annual payments of £3m a year are to be made over six years. Members' contributions are 5% of pensionable salary and total annual pensionable salaries are £20m.

The Scheme Actuary produced FRS17 figures as at 1 January 2012 showing a small surplus in the scheme as detailed below:

Liabilities	*Value (£m)*	*Main Financial Assumptions*	*p.a.*
Actives	94	Discount Rate	5%
Deferreds	65	Salary Increases	4%
Pensioners	89	Deferred Revaluation	3%
Total Liabilities	248	Pension Increases	3%
Total Assets	249		
Service Cost	20%		

The Finance Director (FD) of the sponsoring employer has asked the Scheme Actuary for an explanation as to why the two funding positions are so different. The FD is looking at expanding the business, which would involve investing in a new office. He has therefore suggested that, as the scheme is in surplus, the recovery plan payments would be better used to aid the expansion of the business.

(iii) Set out the points that the Scheme Actuary should make in response to the FD, including:

- why the two valuation results are different, and

- why a FRS17 surplus does not mean that recovery plan payments should be stopped.

[13]

Having read the Scheme Actuary's response, the FD responds as follows:

> "In the triennial valuation there were figures shown on the following bases: ongoing, solvency, PPF, transfer value basis and neutral. In addition I have recently received FRS17 figures. The transfer value, neutral and FRS17 figures were all supposedly on a 'realistic' or 'best estimate' basis, but they produced three different results. It is all very confusing, why can't we just have a single set of figures?"

(iv) Discuss the points that the Scheme Actuary should make in response to the FD, explaining:

(a) the purpose of each basis and [12]

(b) the reasons for the differences between the transfer value, neutral and FRS17 figures. [5]

The Scheme Actuary is now producing FRS17 figures as at 1 January 2013.

The scheme closed to future accrual on 30 June 2012. All active members at that date received a year's extra accrual, so their pension will be based on service to 30 June 2013.

On 30 September 2012 the Trustees reached agreement with an insurance company to buy out the scheme's liabilities for £300m. £285m was paid across on 1 December 2012 and the balance of £15m is due to be paid on 1 May 2013 following a full data verification exercise and reconciliation by the insurer.

The FRS17 assumptions as at 1 January 2013 are the same as those used as a 1 January 2012.

(v) Estimate any settlement, curtailment and/or past service costs that have occurred during the year, stating any additional assumptions that you make. [9]

(vi) Set out the FRS17 balance sheet as at 1 January 2013. [2]

The sponsoring employer is considering listing on the Stock Exchange.

(vii) Outline the changes in the accounting disclosures of the sponsor, in respect of pension benefits, that would be required if the listing went ahead. [6]
[Total 56]

END OF PAPER