EXAMINATION

11 April 2005 (pm)

Subject ST4 — Pensions and other Benefits Specialist Technical

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 6 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 The finance director of a very large company operating a defined benefit pension scheme is concerned with the increasing level of premium being paid to insure the death in service benefits provided by the scheme. These benefits are currently:

- A lump sum of five times the member’s basic salary.
- A non-increasing spouse’s pension equal to 75% of the member’s prospective pension.

(i) Set out the points you, as actuarial adviser to the company, would include in a letter to the finance director explaining why the premiums may have increased. [3]

(ii) Suggest possible ways these premiums could be reduced. [4]
[Total 7]

2 You are the actuary to a large defined benefit pension scheme. The trustees are reviewing the scheme’s investments and are proposing to switch a large proportion of the assets from equities to bonds.

(i) Outline the investment characteristics of bonds compared to equities. [5]

(ii) Outline the possible impact on the members’ benefits of the proposed switch to bonds. [2]

(iii) Set out the factors the trustees should consider when deciding which bonds to invest in. [3]

(iv) Set out the other issues the trustees should take into account when setting an overall investment objective and making decisions on asset allocation. [3]
[Total 13]

3 (i) Outline the features of a market based valuation method that incorporates an equity risk premium and a mark to market method. [4]

(ii) Describe the main features of valuations for the purposes of a company's formal accounts and outline the main differences between such a valuation and a funding valuation. [4]

(iii) Discuss the advantages of presenting valuation results using a range of valuation assumptions and producing values for a range of alternative economic scenarios. [6]

(iv) List the main sections you would expect to find in a funding valuation report. [3]
[Total 17]

4 A member aged 30 left a final salary pension scheme (Scheme A) with an entitlement to a deferred pension. Rather than keeping the deferred pension, he took a transfer value into his new employer's scheme (Scheme B), also a final salary pension scheme. Scheme B provided, in lieu of the transfer value of £20,500, a service credit of 3 years 2 months, incorporating a "value for money" underpin.

The underpin is such that on subsequently leaving Scheme B, the benefits in respect of the service credit will be compared to the original transfer value rolled up with interest at 6% p.a. for the period from date of receipt of the transferred in amount to the date of subsequent exit. The higher of the value of the service credit on the then current transfer value basis and the value of the underpin will be granted.

(i) When the member left Scheme A he had 5 years' pensionable service. Outline possible reasons why the service credit provided by Scheme B is less than 5 years. [5]

(ii) After 8 years' pensionable service as a member under Scheme B, the member then leaves that Scheme and requests another transfer value of his benefits. If the transfer value in respect of the 8 years' pensionable service is £68,000, calculate the total transfer value available, assuming that Scheme B is fully funded on a transfer value basis. [2]

(iii) Describe in what circumstances the value for money underpin is likely to apply. [3]

(iv) Discuss the principal factors to take into account in setting the investment strategy for Scheme B, including reference to the value for money underpin. [6]

[Total 16]

5 An employer offering a final salary pension scheme is proposing for the first time to allow scheme members to pay additional voluntary contributions (AVCs) in order to enhance their scheme benefits. As actuary to the scheme, you have been asked to advise on the following possible options:

- Option 1 — Contributions are invested in a series of individual money purchase accounts separate from the main scheme assets.

- Option 2 — A regular contribution, expressed as a percentage of pensionable salary and payable until normal pension age, purchases a fixed number of "added days" of pensionable service.

For each of these options:

(i) Discuss the advantages and disadvantages from the point of view of the scheme sponsor and the scheme members respectively. [8]

(ii) Discuss how the AVC payments might be invested. [3]

(iii) Suggest the information which should be disclosed to scheme members each year. [4]

(iv) Set out any practical issues which the trustees will need to consider when determining the terms offered to scheme members. [4]
[Total 19]

6 You are the Scheme Actuary to a defined benefit retirement and death benefit scheme which will close to new members with effect from 1 January 2006. The employer has indicated that they intend to set up a defined contribution (DC) section for all employees who join on or after this date (existing active members will continue to earn benefits in the defined benefit section).

Describe how you could help the employer implement and maintain the DC Scheme, giving examples of the issues faced and decisions to be taken.

Your answer should cover the following aspects:

(i) the preferences of the interested parties [7]

(ii) the risks associated with the DC scheme [3]

(iii) design options and process [12]

(iv) ongoing monitoring [6]
[Total 28]

END OF PAPER