Faculty of Actuaries | Institute of Actuaries

EXAMINATIONS

6 April 2001 (am)

Subject 404 — UK Fellowship Pensions

Paper One

You must answer this subject only,
you may not attempt another subject in the 400 series.

Time allowed: Three hours

INSTRUCTIONS TO THE CANDIDATE

1. *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.*

2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*

3. *Write your surname in full, the initials of your other names and your Candidate's Number on the front of the answer booklet.*

4. *Mark allocations are shown in brackets.*

5. *Attempt all 6 questions, beginning your answer to each question on a separate sheet.*

AT THE END OF THE EXAMINATION

Hand in BOTH your answer booklet and this question paper.

In addition to this paper you should have available Actuarial Tables and an electronic calculator.

1 (i) List the types of insurance policies that a self administered pension scheme may use. [3]

(ii) Describe briefly the characteristics of a with profit deferred annuity contract. [3]

(iii) Explain why it may be difficult to use a with profit deferred annuity contract to maintain a stable Minimum Funding Requirement funding level. [5]

[Total 11]

2 (i) Outline the major differences between FAS87 and SSAP24 for a defined benefit plan. [6]

(ii) Outline the possible implications for companies operating defined benefit plans and for pension plan members of the change in the UK accounting standard from SSAP24 to FRED20. [5]

[Total 11]

3 You have recently taken over as Scheme Actuary for a UK final salary pension scheme which provides 1/60th of final pensionable salary for each year of pensionable service. All pensions in payment increase in line with inflation. A valuation of the scheme is now due.

(i) Set out the information you will require to carry out the valuation. (A list of the individual member data items or actuarial assumptions is not required). [4]

(ii) List the checks you would carry out on the individual active member data before carrying out the valuation. [3]

You do not have access to the previous valuation calculations. The only information available to you is the results disclosed in the previous valuation report. You have already carried out an approximate analysis of surplus.

(iii) Describe the additional checks you would place on the liabilities to see if your valuation results are consistent with the previous valuation results [5]

[Total 12]

4 You have recently reported on an actuarial valuation of a UK contracted-out final salary pension scheme which showed that on a long term basis the scheme was 100% funded in respect of past service but the future service contribution rate had increased significantly. The finance director, concerned at escalating costs, has decided to wind up this arrangement and introduce a new defined contribution arrangement.

The finance director has asked you to confirm that, once the required notice period has expired, the company will not be required to make any further payments to the final salary scheme. (You should assume that the final salary scheme will not continue as a closed scheme under trust.)

(i) Draft your response to the finance director. [3 marks for drafting] [8]

(ii) List the actions that the trustees must take to wind up the scheme. [7]
[Total 15]

5 A UK final salary pension scheme provides the following benefits:

- A pension of 1/60th of final pensionable earnings for each year of pensionable service at the Normal Pension Age of 65.
- Final pensionable earnings are the average of the best consecutive three years basic salary in the 10 years before retirement.
- There are no favourable early retirement terms.
- Pensions increase in payment in line with inflation.
- There is a 50% spouse's pension payable on death after retirement.
- Members pay 5% of basic salary.

The company has informed the trustees that it wishes to provide a senior male director with the following improved benefits:

- Normal Pension Age of 60.
- 2/3rds of final pensionable earnings at age 60.
- Final pensionable earnings are to be defined as the best year's basic earnings plus a three year average of consecutive bonuses over the period ending with the best year's basic earnings.
- If the director leaves before age 60 the pension will be $n/ns \times 2/3$rds of final pensionable earnings at date of leaving where n is based on actual company service and ns is based on potential company service to age 60.

The director is 50 years old and joined the company 20 years ago. He joined the pension scheme 15 years ago. His current basic salary is £120,000 and last year he earned a bonus of £30,000.

(i) Describe the issues that the trustees should consider when determining how the company should fund the improvement in benefits. [6]

The trustees have agreed that the company should meet the cost of the benefit improvement by paying an additional contribution expressed as a fixed percentage of the director's basic salary paid over the future working lifetime of the director.

(ii) Calculate the level additional percentage of basic salary that the company should contribute to meet the cost of the improvement. State, with reasons, any assumptions that you make. [8]

The company has indicated that it wishes to fund the same improved benefits to a new director aged 45 who has just joined the company on the same basic salary.

(iii) Describe why the company might use a funded unapproved retirement benefit scheme ("FURB") to meet this benefit improvement. [3]

(iv) Calculate the additional payments that the company would need to make to the existing scheme, the FURB and to the new director to ensure that he is in the same financial position as the first director. State with reasons any assumptions that you make. [8]

[Total 25]

6 Supa Comp (UK) Ltd has decided to sell its chip manufacturing business in the UK to Megachips (UK) Ltd. Supa Comp (UK) Ltd will continue as a provider of software services.

Supa Comp (UK) Ltd currently has a final salary pension arrangement for all employees. Megachips has no scheme, but the Sale and Purchase Agreement requires them to provide equivalent final salary benefits in return for a bulk transfer of assets to a new scheme.

(i) List the other information that will be in the pensions clause of the Sale and Purchase Agreement. (Details of the financial and demographic assumptions are not required.) [3]

(ii) Describe what arrangements may be made to allow for the time taken to set up a new scheme. [6]

(iii) Describe, with reasons, the difference there may be between the assumptions used in the last valuation of the Supa Comp scheme, and the terms negotiated for the transfer. [6]

(iv) The trustees of the Supa Comp scheme are concerned that the transfer value being made is too large, and will dramatically affect the funding position of the existing scheme. They have asked you, as an independent actuary to explain to them what they may do to resolve this. Draft your reply. [11]

[5 marks for drafting]
[Total 26]