

EXAMINATIONS

20 September 2004 (am)

Subject 424 — SA 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. *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.*

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 Actuarial Tables and your own electronic calculator.

- 1** A company operating in SA currently has a defined benefit pension fund. The company is reviewing its pension provision and is considering switching future pension provision to a defined contribution basis.
- (i) Outline the possible reasons why the company might wish to consider switching future pension provision to a defined contribution basis. [5]
- (ii) Outline the advantages and disadvantages from the point of view of the member of benefits provided on a defined contribution basis as opposed to a defined benefit basis. [5]
- [Total 10]
- 2** The trustees of a newly established defined benefit SA pension fund are establishing the investment strategy for the fund.
- (i) It has been suggested that investments should be in either a segregated fund, or an insurance company pooled managed fund contract, or a “guaranteed fund” contract with vested and unvested accounts with an insurance company. Discuss the advantages and disadvantages of these three options from the point of view of the trustees. [7]
- (ii) If instead the fund was an existing fund with investments only in a “guaranteed fund” contract with an insurance company discuss the factors which the trustees should take into account when deciding whether to switch the existing “guaranteed fund” assets into an alternative investment medium. [3]
- [Total 10]
- 3** A SA final salary pension fund has just had a valuation completed as at 1 January 2004.

Ongoing Valuation Balance Sheet — 1 January 2004

	<i>R 000's</i>
Assets	
Market Value	120,000
Liabilities in respect of:	
Pensioners	60,611
Deferred pensioners	40,004
Active members	49,995
Total	150,610

The only differences between the financial assumptions underlying the minimum benefit transfer value basis are as follows:

Pre-retirement —

Deferred Pensioners: Effective discount rate 0.5% per annum higher on minimum benefits.

Average term to retirement 15 years.

Active Members: Effective discount rate 1.5% per annum higher on minimum benefits.

Average term to retirement 20 years.

Members with a deferred pension currently have the option to take an unreduced minimum benefit as a transfer value.

- (i) State the factors the trustees should take into account when deciding whether to continue to offer unreduced transfer values. [5]
- (ii) Assuming accrued pensions for active members and deferred pensioners are treated equitably for priority purposes calculate two possible percentage reductions in transfer values. State any further assumptions you make. [7]
- (iii) The trustees have agreed to reduce transfer values. State any changes which should be made to the notes attached to the disclosure quotation of a transfer value. [2]

[Total 14]

- 4 You are advising the trustees of a SA salary related defined benefit fund who are reviewing the fund's investment strategy and formulating an investment policy.

At the last valuation on 31 December 2003, the scheme had the following liability profile on an ongoing basis:

	<i>Rm</i>
Active members	300
Deferred pensioners	150
Members in receipt of pension	250
TOTAL	700

The market value of the assets was R750m, 90% of which was invested in equities and property.

Trustee A would like all of the fund's assets to be invested in index-linked bonds as this "will protect the fund against future inflation".

Trustee B would like all of the fund's assets to be invested in fixed interest Eskom and other corporate bonds "as this provides a good match against the liabilities for members once they ultimately retire".

Trustee C would like the fund to be invested 37,5% in SA equities of companies operating mainly in SA and 37,5% in SA equities that earn all or almost all of their income in US Dollars, because "the equity market will strengthen over the next 5 years, at which time the SA currency will be consistently defined relative to the US Dollar", and the balance of the assets to be invested in a mixture of bonds with a small residual in cash. You should treat as a SA equity any equity that is listed on the Johannesburg Stock Exchange no matter where its primary listing is.

(i) (a) Outline the general investment objectives for the trustees of defined benefit schemes.

(b) Discuss each of the above statements in relation to these objectives.

[8]

(ii) Suggest, with reasons, a suitable investment strategy for the fund.

[7]

[Total 15]

- 5** The government of a country with a well-established occupational pension sector has decided to change the way in which tax approval limits operate. In future, individuals will only be able to enjoy favourable tax treatment on funds with a value below a particular amount (R12.0m). The legislation is to be introduced in one year's time and the limit will apply over the lifetime of the individual (rather than on a scheme by scheme basis). Any funds accruing in excess of the maximum will be taxed at a penal rate.

You have been asked to advise a senior individual aged 40 who is negotiating pensions package with a new employer who operates a defined benefit pension scheme. The individual is intending to transfer his previous final salary benefits in to the new employer's scheme — the current transfer value is R10.8m.

Outline the issues the individual needs to take into account in negotiating the package and the information you will need in order to advise him.

[24]

6 A SA company is preparing the disclosure on the SA final salary pension fund (the Fund) for its company accounts. The Fund is closed to new entrants. The pension increase policy of the Trustees, in terms of the Pension Funds Second Amendment Act, is to grant pension increases at 100% of the rate of inflation, as measured by the rate of increase in the consumer price index, to pensions and deferred pensions, and the employer has given his agreement to this policy, even if it requires additional contributions. The disclosure is at 31 March and follows the requirements of AC116.

- (i) The Financial Director (FD) is keen that the disclosed shortfall on the Fund is kept to a minimum.

Discuss what scope there is in setting the actuarial assumptions to assist in achieving the Financial Director's wish. State any constraints. [15]

- (ii) Prior to discussing possible revisions to the assumptions, as company actuary, you have calculated the Fund's balance sheet at 31 March 2004, but on the assumptions used for the year ending March 2003. The results and principal financial assumptions are as follows:

	<i>Year Ending 31 March 2003</i>	<i>Year Ending 31 March 2004</i>
Market value of assets	R29.000m	R24.000m
Actuarial value of assets	R24.000m	R28.750m
Value of liabilities in respect of:		
Active members	R10.000m	R13.550m
Deferred pensioners	R 7.000m	R 7.700m
Pensioners	R12.000m	R12.350m
Total	R29.000m	R33.600m
Surplus / (Shortfall)	0	(R 9.600m)

Assumptions:

Discount rate	10.0% p.a.	based on yield curve
Salary increases	8.7% p.a.	inflation + merit + other
Inflation rate	5.8% p.a.	pension increases

Long term expected return on:

Bonds and Cash	10.0% p.a.	gross
Equities	12.0% p.a.	dividends + gains
"Administration" costs	(1.0% p.a.)	in terms of overall yield
Retirement Funds Tax	(18.0% p.a.)	tax rate

The asset portfolio breakdown at 31 March 2003 was 40% Bonds & Cash, 60% Equities.

The only cashflows throughout the last fiscal year were:

Contributions (member and company)	R3.500m
Pensions paid	(R0.800m)
Gross interest & dividends	R1.400m
“Administration” costs	(R0.330m)
Retirement Funds Tax	(R0.090m)

The FD has asked for an analysis of the main items of experience.

If the cost of one year’s accrual of pension benefits as at 31 March 2003 on the 2003 AC116 basis is R2.500m, estimate the contribution to surplus or deficit from the experience on the following four items and the actual annual rate of salary increase and investment return, assuming membership movements were in line with expectations. You should assume valuation basis allows for zero decrements on withdrawal or death in service and retirement at normal retirement age only.

- (a) salary inflation
- (b) investment return
- (c) “administration” costs
- (d) retirement funds tax

[5]

(iii) After discussion an increase in the discount rate to 12% has been proposed with all other assumptions unchanged (yield curve plus 1.5%).

- (a) If the discounted mean term of the liabilities, before the change in the rate of discount, is 14, then estimate the new balance sheet on the proposed rate discount rate of 12% p.a.
- (b) The FD has, on the basis of the actual experience, also proposed a salary increase assumption of 7.25% p.a. If the discounted mean term of the liabilities of the pensioners and deferred pensioners combined, before the change in the rate of discount, is 10, then estimate the new balance sheet incorporating this adjustment on top of that in (a) above.

[3]

(iv) Comment on the proposals in (iii) above.

[4]

[Total 27]

END OF PAPER