INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

30 September 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 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 three 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 (i) List the items that should be included in a pension scheme's Statement of Funding Principles [4]

(ii) Outline the measures that have been put in place to ensure that actuarial advice given as part of the statutory funding valuation can be relied upon. [5]

A triennial valuation of a defined benefit pension scheme, which is closed to new members, was completed as at 1 July 2012. The results are shown in the table below:

Technical provisions as at 1 July 2012

	Assets	*Liabilities*
Managed Fund	£165m	
Pensioners	£60m	£100m
Active Members		£70m
Deferred Members		£50m
Total	£225m	£220m
Surplus	£5m	
Standard Contribution Rate	25%	
Total Pensionable Salaries	£10m p.a.	

All pensions increase in line with Retail Price Inflation subject to a maximum of 5% per annum. When a member retires, a non-increasing pension equal to their pension at retirement is secured by purchasing an annuity from an insurer. The increases to the pension are then paid directly to the member from the scheme funds. The asset of £60m shown is therefore the value of the non-increasing pensions backed by annuities.

The annual update as at 1 July 2013 is due. The main financial assumptions as at 2012 and 2013 are shown below:

	1 July 2012	*1 July 2013*
	p.a.	
Pre-retirement discount rate	5.5%	4.5%
Post-retirement discount rate	4.0%	3.0%
Inflation (RPI)	3.0%	2.5%
Pension increases (RPI max 5%)	2.9%	2.4%
Salary increases	4.0%	3.5%
Deferred revaluation (RPI max 5%)	3.0%	2.5%

(iii) Assuming that the 2012 assumptions have been borne out, estimate the technical provisions and funding positions as at 1 July 2013 using:

(a) the 1 July 2012 basis.
(b) the 1 July 2013 basis.

You should state any additional assumptions that you make. [10]

The annual update has now been completed and the results on the 2013 basis are below:

Technical provisions as at 1 July 2013

	Assets	*Liabilities*
Managed Fund	£180m	
Pensioners	£68m	£104m
Active Members		£90m
Deferred Members		£59m
Total	£248m	£253m
Deficit	£5m	

The average salary increase awarded throughout the year to 1 July 2013 was 8% and the increase in RPI over the year was 4%.

(iv) Estimate the contribution to the change in funding position due to:

(a) investment return.
(b) salary increases.
(c) inflation.

[6]

(v) List other possible reasons for the change in funding position over the year. [3]

As part of the annual update as at 1 July 2013, the Scheme Actuary estimated the total liabilities in excess of the non-increasing pensions already insured to be £199m on a solvency basis.

(vi) Outline the reasons why the liabilities on the solvency basis will differ from those calculated for the technical provisions. [4]

The sponsoring employer decides to obtain a quotation from an insurance company for the cost of insuring all remaining liabilities in excess of the non-increasing insured pensions. The quotation obtained is £226m.

(vii) Discuss possible reasons why the actual quotation differs from the value calculated by the Scheme Actuary. [8]

[Total 40]

2 (i) Identify four potential adverse outcomes associated with pension schemes for each of:

- the company: and
- the employees

and for each such outcome identified, give an example of how that outcome might arise. [8]

(ii) Discuss the extent to which the above potential adverse outcomes might be present for each of the following designs for a UK pension scheme:

(a) final salary schemes
(b) defined contribution schemes
(c) cash balance schemes [12]

NewCo plc, a computer services company, is establishing operations for the first time in the UK. NewCo plc is highly innovative and would like to become the employer of choice in the industry. As part of this strategy, it is considering offering a pension scheme with sophisticated risk-sharing mechanisms between the company and the employees.

(iii) Propose, with reasons, a scheme design that you believe achieves NewCo's aims, outlining how the design will share most of the risks between members in an effective manner. You may ignore any legislative constraints. [5]

(iv) Comment on the extent to which the current legislative environment in the UK restricts the design of plans which seek to share risk between a company and its employees. [5]
[Total 30]

3 The ABC Pension Scheme is a large final salary pension scheme with invested assets of £1.5bn. There are no active members and all pension liabilities are secured with an insurer through a policy taken out by the trustees. The value of the liabilities relating to deferred pensioners on a number of different bases is as follows:

Calculation basis	*Value of liabilities*
Technical Provisions	£1.5bn
Cash Equivalent Transfer Values	£1.0bn
Accounting Reserve	£1.3bn
Cost of securing liabilities with an insurer	£3.0bn

ABC, the sponsoring employer of the scheme, is in financial difficulties and there are serious doubts about its ability to survive. ABC falls in to the highest risk category for PPF levy purposes.

The trustees of the scheme have been approached by ABC with a proposal to enhance transfer payments available to deferred pensioners for a limited period to encourage them to transfer their benefits out of the scheme. ABC is proposing that an enhanced transfer offer is made so that the standard cash equivalent transfer values are increased by 30% for each deferred pensioner member of the scheme who opts to transfer out. No additional money would be paid in to the scheme by ABC so the offer would be financed from the existing scheme assets.

ABC has asked the trustees to agree to the proposal and to work with it to implement the offer. The trustees have asked the Scheme Actuary to draft a comprehensive report covering all relevant issues that need to be considered in the design and implementation of an enhanced transfer exercise, referring to the proposal made by ABC, and identifying any additional information that would be needed in order to decide whether or not to agree to the proposal.

Set out the points that the Scheme Actuary should make in his report. Your answer should include the following:

- issues relating to the design of the offer
- implementation practicalities
- the potential impact on the financial position of the scheme
- legal and regulatory issues
- the potential impact on individual members
- comments on the cash equivalent basis and the investment strategy

[30]

END OF PAPER