

INSTITUTE AND FACULTY OF ACTUARIES



EXAMINATION

27 September 2013 (am)

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 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 seven 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 The actuarial profession in a developed country has an overall objective of ensuring a high level of professional expertise, good practice and reliability of advice from its membership.

- (i) (a) Outline approaches that could be followed to achieve the overall objective of the profession.
- (b) Indicate how the approaches might achieve the profession's objectives.

[4]

The profession is now considering introducing a mandatory requirement for specified types of actuarial work to be reviewed by another qualified actuary.

- (ii) (a) Outline the advantages of this requirement.
- (b) Set out the general areas that the reviewer may consider as part of his review.
- (c) Give two possible examples of pensions work which may be required to be reviewed.

[3]

[Total 7]

2 An employer currently sponsors a defined benefit pension scheme. The employer has decided to replace the scheme with a hybrid pension scheme. It is considering adopting one of the following two benefit structures:

- a defined contribution scheme with an investment return underpin; or
- a defined contribution scheme with no investment return underpin but with pre-determined factors to be used to convert members' funds into a pension at retirement.

- (i) Outline how each of the two hybrid schemes may operate in practice. [6]
- (ii) Discuss the issues that the employer should consider for each option. [6]

[Total 12]

- 3**
- (i) List four distinct types of actuarial valuation that may be carried out for a defined benefit pension scheme. [2]
- (ii) For each of the valuations in part (i):
- (a) List the various parties that would be interested in the valuation.
- (b) Outline the purpose and key features of the valuation. [8]
- (iii) Describe the issues that the actuary must consider when setting the discount rate assumption for an actuarial valuation. [3]
- [Total 13]

4 The scheme rules of a large final salary pension scheme in a developed country allow members to take a number of options.

- (i) (a) Outline the general principles that should be considered in setting the terms:
- to allow members to take early and late retirement; and
 - to exchange some of their pension for cash at retirement.
- (b) Comment on how frequently the terms should be reviewed. [6]

The scheme also has a defined contribution additional voluntary contribution (AVC) facility.

- (ii) Discuss the potential ways in which the scheme may convert members' AVC funds to pensions at retirement. [3]

The scheme currently uses sex-specific factors for the early and late retirement and cash commutation options. Following an amendment to legislation, the country's government has ruled that pension schemes are no longer permitted to use factors which differ for men and women.

- (iii) Discuss the implications of this ruling for the scheme. [3]
- [Total 12]

5 The sponsoring employer of a final salary pension scheme is a large company with an overseas parent. The scheme is managed by a board of Trustees. Only a small proportion of the total workforce are members of this pension scheme.

(i) Outline the information that the Trustees may use to determine the strength of the employer covenant, considering the following areas:

- balance sheet financial strength
- profitability
- cash flow
- size and funded status of the pension scheme

[8]

The trustees are currently deciding whether they should appoint an external adviser to assess the employer covenant or make the covenant assessment themselves.

(ii) Outline the issues that the trustees should consider in deciding when making their decision.

[4]

[Total 12]

6 A large defined benefit pension scheme has recently had a number of members of the sponsor's senior management team appointed as trustees of the scheme. The scheme's global pension advisers have suggested that a trustee sub-committee be established to work closely with the employer to oversee a risk management framework.

The majority of the scheme's liabilities are in respect of its current pensioners. The majority of the scheme's assets are invested in equities. The scheme currently has an in-house pensions administration team.

The sub-committee will be responsible for implementing a framework to reduce the incidence and impact of risks that could affect the pension scheme. The sub-committee will work closely with the sponsoring employer.

(i) Set out the high level stages of the process that the sub-committee might follow, with reference to the actuarial control cycle.

[4]

The sub-committee has decided to look at the following areas:

- Trustee knowledge and understanding
- Scheme advisers
- Conflicts of interest
- Record keeping
- Employer covenant
- Investments

(ii) Suggest how the key risks under each of the areas above may be controlled or reduced.

[12]

(iii) Outline the regular procedures that the sub-committee should put in place as part of its risk management framework.

[6]

[Total 22]

7 A company with a large multinational parent is in the process of replacing its current defined benefit scheme with a defined contribution (DC) pension scheme. The local pensions manager has asked the actuary advising the scheme for a report outlining the key features of a good quality DC scheme and the risks associated with DC schemes.

(i) Outline the points that the actuary should make under the following headings:

- ensuring the DC scheme is fair and offers good value for members
- governance
- the duties of the parties running the scheme
- administration
- communication to members

[11]

(ii) Set out the key benefit design considerations that the company will need to make in respect of the DC pension scheme.

[11]

[Total 22]

END OF PAPER

