

# INSTITUTE AND FACULTY OF ACTUARIES



## EXAMINATION

24 April 2017 (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 must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *You have 15 minutes of planning and reading time before the start of this examination. You may make separate notes or write on the exam paper but not in your answer booklet. Calculators are not to be used during the reading time. You will then have three hours to complete the paper.*
4. *Mark allocations are shown in brackets.*
5. *Attempt both questions, beginning your answer to each question on a new page.*
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** A UK company provides a defined contribution (DC) pension scheme for its employees. Contribution rates are as follows:

- The Company pays 4% of pensionable earnings for each scheme member.
- Members pay a minimum of 4% of pensionable earnings.

Members may choose to pay a higher percentage but further contributions are not matched by the Company.

A member joins the scheme at age 25, pays the minimum level of contributions and remains a member until retirement at age 65. His current level of pensionable earnings is £30,000 per annum.

(i) Estimate the expected fund at retirement for this member. State any assumptions you make. [6]

(ii) Discuss whether the scheme is likely to provide an adequate income in retirement for this member. Your solution should consider:

- the expected benefits at retirement.
- other retirement provision that members might have.
- any other relevant factors.

[13]

(iii) Propose, with reasons, actions the Company might take to improve members' retirement outcomes from the scheme. You should consider:

- changes to the benefit design.
- ways to encourage or support members to take actions to improve their retirement outcomes.

[8]

The Company also sponsors a defined benefit (DB) pension scheme which was closed to accrual 20 years ago. An increasing number of members are choosing to transfer their benefits out of the DB scheme immediately before retirement in order to access the flexibility available in DC arrangements.

(iv) Outline the factors that will influence whether a DB member chooses to transfer out immediately prior to retirement. [7]

(v) Suggest, with reasons, what support the Company could provide DB members with as they approach retirement. [7]

(vi) Discuss the other issues that the Company and Trustees of the DB scheme should consider in relation to the increasing number of transfers. [14]

[Total 55]

**2** A large UK company sponsors a defined benefit (DB) pension scheme for all staff. It has been decided that the DB Scheme will be closed to future accrual from 31 December 2017. The Company will set up a new defined contribution (DC) pension plan for future service benefits.

- (i) Suggest, with reasons, possible actions that the DB scheme's Trustees might take in response to the Scheme's closure. [10]

Existing employees will have the option to transfer the value of their accrued DB benefits to the DC Plan. If a member does not choose to transfer, their accrued DB benefit will remain linked to final pensionable salary at their future date of leaving or retirement.

The Company has asked its own actuary to help draft proposals on how to calculate transfer values for those of the current active members who wish to transfer the value of their accrued DB benefits into the DC Plan.

- (ii) Outline the points that the actuary should include in his report. [8]
- (iii) Describe the methods by which the DB Scheme's funding level could be measured. [3]

There is a practice of granting discretionary pension increases to pensions in payment from the DB Scheme in respect of benefits accrued before 6 April 1997.

- (iv) Discuss the issues the Trustees should consider in deciding whether to grant the next annual discretionary increase for pensions in payment. [5]

The latest actuarial valuation of the DB Scheme as at 31 March 2015 showed a funding level of 105% measured on a Technical Provisions basis. The Company has suggested that this level of funding should mean that there will be no need for it to make any more payments to the DB Scheme. The Trustees have asked the Scheme Actuary to comment.

- (v) Set out the points that the Scheme Actuary might make in response to this suggestion. [7]

The Trustees' view is that the key risk the DB Scheme faces is of members living longer than expected.

- (vi) Discuss how the Trustees might mitigate this risk. Your answer should also address any difficulties they might encounter. [12]
- [Total 45]

**END OF PAPER**

