

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

27 April 2011 (pm)

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 BOTH 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.

<p><i>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.</i></p>
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- 1 The Impenetrable Motor Company (“the Employer”) is the sponsoring employer of the IMC UK Pension Scheme (“the Scheme”). It is wholly owned by the Arab Vehicle Corporation, which is in turn owned by a Middle Eastern oil state.

The IMC UK Pension Scheme offers a pension at retirement based on service to, and salary at, retirement, and remains open to both future accrual and new members. It follows a cautious investment strategy, predominantly in UK Government stocks and high quality corporate bonds. Full valuations are carried out every three years.

The Scheme Actuary has recently completed the triennial valuation as at 30 September 2010, with the formal valuation report having been signed off in February 2011. The results of this valuation are as follows:

Technical provisions at 30 September 2010:

Active Members:	£10m
Deferred Members:	£35m
Pensioner Members:	<u>£25m</u>
Total Technical Provisions:	£70m
Assets:	<u>£50m</u>
Deficit:	<u>£20m</u>

The total pensionable salary roll at 30 September 2010 was £4m.

The total contributions required in respect of ongoing accrual are at a rate of 25% of pensionable salary.

A recovery plan has been put in place to fund the deficit over eight years by payment of further contributions of £3.0m per annum.

- (i) Explain the key purposes of each of the three generic Technical Actuarial Standards and state, with reasons, which apply to the formal valuation report. [7]

- (ii) Describe the other key documents that must be prepared as part of the valuation process. [8]

Initially, the Trustees and the Employer could not agree a funding plan.

- (iii) Explain how this disagreement might have been resolved. [4]

In June 2011, the Employer suffers the cancellation of a highly profitable contract, worth £100m per annum turnover for five years. The Finance Director has approached the Trustees to explain that the Employer can no longer afford the agreed contributions.

- (iv) Set out the initial questions that the Trustees should ask the Employer in order to assess the possible impact on the Scheme. [6]

The Employer has proposed that the Scheme be closed to new members, and that accrual be ceased for current active members, who will be treated as having left service.

- (v) Outline the legal issues that the Trustees should consider before implementing such a change. [5]
- (vi) Discuss the financial impact of this proposal on the employer. Your answer should include quantification of the effect of the closure. You can assume that the scheme is not contracted out. [8]

It is now October 2011, and the Scheme has now been closed to both new members and future accrual. The Trustees now believe that the Employer is in a much weaker trading position than they had assumed at the valuation.

- (vii) Discuss four possible courses of action that the Trustees could take, including consideration of:
- the potential impact of the course of action on the Trustees, the members and the Employer;
 - any additional documentation required; and
 - any other parties who may need to be consulted.

[20]

[Total 58]

- 2 A UK defined benefit pension scheme is closed to future accrual and has the following benchmark investment strategy:

UK equities	40%
Overseas equities	10%
Property	10%
UK corporate bonds	30%
UK Government fixed-interest bonds	10%

A valuation has just been completed as at 31 December 2010. The technical provisions are as follows:

Deferred pensioners	£150m
Pensioners	<u>£650m</u>
Total technical provisions	£800m

All pension increases before and after retirement are linked to the Retail Prices Index and all deferred pensioners are within ten years of the scheme's normal retirement age. The funding levels relative to the technical provisions and discontinuance bases are 75% and 50% respectively.

The sponsoring employer is experiencing financial difficulty and it has agreed with the scheme's Trustees to a recovery plan that will aim to remove the deficit relative to the technical provisions over 15 years.

- (i) Explain why the Trustees and sponsoring employer may have agreed to a recovery period longer than 10 years. [6]
- (ii) Outline the risks during the recovery period from the viewpoint of the Trustees in respect of:
- the investment strategy
 - the covenant of the sponsoring employer [4]
- (iii) Suggest ways of mitigating the risks identified in (ii) above. [8]

The Trustees have asked the Scheme Actuary to comment on the suitability of the investment strategy without performing detailed calculations or undertaking an asset liability modelling exercise.

- (iv) Set out the main points that the Scheme Actuary should raise in a report to the Trustees in relation to:
- the demographic profile of the membership
 - the scheme's current investment strategy
 - funding issues
 - the covenant of the sponsoring employer [14]

- (v) (a) Suggest, with reasons, two alternative suitable benchmark investment strategies.
- (b) Outline the implications that each of your proposed investment strategies may have on the funding level going forward.

[10]

[Total 42]

END OF PAPER