INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

22 September 2021 (am)

Subject SP4 – Pensions and Other Benefits

Specialist Principles

Time allowed: Three hours and twenty minutes

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.

If you encounter any issues during the examination please contact the Assessment Team on T. 0044 (0) 1865 268 873.

1 A company sponsors a defined benefit pension scheme. The company currently finances the scheme by making a lump sum contribution, equal to the expected cost of the benefits, at the point a new member joins the scheme.

(i) Discuss the suitability of the company's financing approach. [6]

The scheme managers have asked their investment advisor to review the scheme's investment strategy.

(ii) State possible reasons why the scheme managers have asked for a review of the scheme's investment strategy. [5]

[Total 11]

2 The government of a country aims to ensure that dependants of citizens who die after age 70 have sufficient funds to cover funeral costs on death.

(i) Discuss how the government can ensure this aim is met. [6]

The government is concerned that the actuaries based in the country may be providing inappropriate advice to their clients.

(ii) State four factors that may give rise to an actuary giving inappropriate advice. [2]

(iii) Suggest, for each factor in part (ii), two policies the government could enforce to address its concerns. [4]

The government has asked their advisor to produce a guidance document setting out the roles and responsibilities of scheme managers. One of the reasons for asking their advisor to produce the guidance document is a rise in finance directors becoming new scheme managers.

(iv) Set out the points that the advisor may include in the guidance document. [8]

[Total 20]

3 A company that sponsors a defined benefit pension scheme is undergoing a restructure whereby they plan to make a number of active members in the scheme redundant.

The rules of the scheme specify that benefits provided to active members on redundancy must be enhanced compared to the value of benefits they would have received had they remained in employment until their normal retirement age.

(i) Give, with examples, two possible methods of enhancing the benefits provided on redundancy. [2]

(ii) Describe the issues the company should consider when setting the enhancement terms. [7]

[Total 9]

4 An individual, aged 45 and earning \$50,000 p.a., is making contributions of 10% of salary into a personal pension arrangement. The current value of their fund is \$150,000.

You have been asked to assist in setting up a model for independent financial advisors to estimate fund values at age 65 for individuals in the pension arrangement.

(i) Describe how you would use a model to estimate the individual's fund at age 65. [6]

At age 65, the individual has an accumulated pension fund of \$450,000. They are now deciding whether to convert their fund into an income either by purchasing an annuity, or taking income drawdown. The individual considers themselves to be in ill health.

(ii) State the main features of:

(a) an annuity.

(b) income drawdown.

[3]

(iii) Discuss the factors the individual should consider when making their decision. [8]

[Total 17]

5 A company sponsors two defined benefit pension schemes – 'Scheme A – Main Scheme' and 'Scheme X – Executive Scheme'.

Your firm is the actuarial advisor to the scheme managers of Scheme A. The company has now appointed your firm as actuarial advisor to Scheme X, replacing the previous actuarial advisor.

The actuarial valuation of both schemes with an effective date of 31 January 2021 is due.

(i) Describe the information you will need to request from the previous actuarial advisor, or the managers, in order to perform the actuarial valuation of Scheme X. [9]

As at 31 January 2020, the schemes had the following funding positions on their funding basis:

Scheme (figures in millions)	*Scheme A*	*Scheme X*
Assets	2,400	500
Liabilities	2,000	1,100
Surplus/deficit	400	(600)

You have asked an actuarial student at your firm to perform the actuarial valuation for both schemes at 31 January 2021. They present to you the results as follows:

Scheme (figures in millions)	*Scheme A*	*Scheme X*
Assets	2,600	600
Liabilities	2,200	2,600
Surplus/deficit	400	(2,000)

The funding basis adopted for Scheme X was agreed by the managers to be in line with that adopted for Scheme A, but updated for market conditions as at 31 January 2021.

(ii) Discuss possible reasons for the change in funding position for Scheme X. Your answer should take consideration of the change in the funding position for Scheme A. [10]

[Total 19]

6 (i) Explain under what circumstances the sponsor covenant should be considered when undertaking a funding valuation. [2]

A vehicle manufacturing company is in financial distress. It sponsors a large defined benefit pension scheme, which is open to accrual. The pension scheme is currently in deficit on its funding basis and the company is paying additional contributions over a defined period to reduce this deficit. The directors of the company have contacted the scheme's managers to request a temporary reduction in these deficit reduction contributions.

(ii) Discuss the implications of the managers accepting this request. [8]

(iii) Describe four possible alternative financing arrangements that could be put in place by the scheme's managers to feel more comfortable in accepting this request. [8]

The scheme managers have agreed to adopt a temporary suspension of deficit reduction contributions. The company finance director has suggested that the payment of transfer values to members leaving the scheme is also suspended during this period.

(iv) Describe the possible implications on the scheme if transfer values are temporarily suspended. [6]

[Total 24]

END OF PAPER