

# INSTITUTE AND FACULTY OF ACTUARIES



## EXAMINATION

05 May 2020 (am)

### **Subject SP4 – Pensions and Other Benefits Specialist Principles**

Time allowed: Three hours and fifteen minutes

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 new set of managers has recently been appointed to a defined benefit pension scheme. The managers have little knowledge of actuarial valuations. They have asked the scheme's actuary to provide them with a training session on the issues they should consider when setting assumptions for actuarial valuations.

Write down the points that might be covered in the training session. [7]

- 2** A company is setting up a new defined contribution pension scheme. A key objective of the new scheme is to control the cost of benefit provision and the company is considering setting eligibility criteria for the pension scheme.

Describe four distinct eligibility criteria that may be imposed. [10]

- 3**
- (i) Describe what is meant for a pension scheme to integrate State pension benefits in the scheme's benefits. [1]
  - (ii) Write down two possible methods of integrating State pension benefits in the pension benefits provided under a defined benefit pension scheme. [1]

A final salary pension scheme is based in Country A. The scheme provides benefits that increase annually in payment in line with the national inflation index.

The Government of Country A is introducing a minimum increase of 3% per annum to all pensions in payment. This will apply to pension increases calculated after 1 January 2021. However, schemes are allowed to delay implementation by up to 2 years subject to pensioners being no worse off in terms of total benefits received, as a result of the delay.

- (iii) Describe the implications for the scheme and its managers of the introduction of this minimum pension increase rate. [8]
- [Total 10]

- 4**
- (i) State the possible options that exist for the provision of outstanding benefit payments when a defined benefit scheme is discontinued. [3]

A company sponsors a large defined benefit pension scheme, which is closed to future benefit accrual. It has proposed that all pension benefits be secured with an insurance company by means of deferred and immediate annuities in the name of the scheme's members.

- (ii) Describe the advantages and disadvantages of the company's proposal. [10]
- [Total 13]

- 5** (i) State the information that may need to be disclosed in a company's financial statements in relation to their defined benefit pension scheme. [4]

A company, which sponsors a defined benefit scheme, is in the process of producing accounting disclosures. As part of this process the company has asked its actuary to analyse the withdrawal experience of the scheme's active members over the past 3 years.

- (ii) Outline how such analysis could be performed. [2]
- (iii) Outline the limitations that should be considered when using the results of the analysis. [4]

The accounting disclosures have been completed and they show a balance sheet surplus. The company is interested in the potential uses of the surplus in the pension scheme.

- (iv) Describe the potential uses for the company of a surplus in the scheme, commenting on any difficulties they may have with such uses. [8]
- [Total 18]

- 6** An actuarial consultancy, XYZ Actuarial ('XYZ'), is in the process of producing a new model. This model will allow XYZ, for each of its defined benefit pension scheme clients, to project the funding position from the date of the latest actuarial funding valuation to determine the approximate funding position at any future date.

- (i) Discuss the key factors that XYZ should consider in setting up the model. Your answer should include consideration of:

- projection of the liabilities.
- projection of the assets.
- data required.
- assumptions.

You do not need to provide the formulae for benefit projection models. [12]

The government of the country in which XYZ is based has asked XYZ to produce a model to enable the government to project State pension benefits. The State pension is offered to all citizens in the country and is unfunded.

- (ii) Explain how the model for projecting State pension benefits would differ from the projection of actuarial funding valuation results. [5]
- [Total 17]

**7** The managers responsible for a defined benefit pension scheme would like to disclose information on a regular basis to members on their benefits in the scheme. They have decided to provide active members with individual annual benefit statements.

(i) Describe the key information that may be provided in these statements. [10]

The sponsoring company of the scheme would like the statements to include indicative transfer values in respect of the members' benefits.

(ii) Discuss the potential impact on the scheme if indicative transfer values are included in the statements. [7]

An indicative transfer value was included in the annual statements as at 1 April 2020 for the active members. Soon after the statements were issued, the scheme's managers revised the assumptions used to determine transfer values. The 1 April 2021 annual statements are now due. The overall impact of the revision to the assumptions is that the indicative transfer values as at 1 April 2021 will be lower for older members and higher for younger members compared to the previous year.

(iii) (a) Discuss the concerns the active members may have in relation to their indicative transfer value amount once they receive their 1 April 2021 annual statement.

(b) Suggest ways in which the scheme's managers can address the concerns identified in part (a).

[8]

[Total 25]

**END OF PAPER**