INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

4th September 2021

Subject SP4 – Pensions and Other Benefits

Time allowed: 3 Hours 30 Minutes (14.30 – 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. ***Please read the instructions to examinees sent along with hall ticket carefully and follow without exception.***

2. ***The answers are not expected to be any country or jurisdiction specific. However, if Examples/illustrations are required for any answer, the country or jurisdiction from which they are drawn should be mentioned.***

3. ***Mark allocations are shown in brackets.***

Q. 1) You are the actuarial advisor to the National Pension Regulator of your country, which is responsible for regulating and overseeing the pension system for the whole country.

Historically, pensions for Government employees used to be provided under a Defined Benefit (DB) System, where pension would generally be 50% of last drawn salary. The Government moved to a Defined Contribution (DC) system about 25 years back. The contribution rate for the DC system was set to be roughly equal to the cost of providing the DB system back then. Benefits under the DC system are secured through annuity purchase.

i) The Chairman of the Regulator is concerned that members retiring today under the new DC system are receiving significantly less pension than they would have done under the previous DB system.

Set out the reasons and the points you can make as a response to the Chairman's concerns. (7)

ii) Pension penetration in the country is relatively low. Moreover, the general pension landscape in the country within the organized sector has been gradually moving to a DC regime over the past two decades and the trend is likely to continue in the future. The Regulator is considering introducing legislation with respect to provision of DC schemes.

Outline areas where regulations may be imposed. (9)

[16]

Q. 2) You are the advisor to the Trustees of one of the largest Public Sector Undertakings (PSU) in the country for the past several years. The PSU offers a Defined Benefit Pension plan under a funded arrangement. The country's legislation allows flexibility in terms of investment avenues for the funds. Since the size of the fund is large, the assets are invested both directly by the trust as well as in products through insurance companies. As part of the latest investment review which you are helping with, the trustees are proposing to switch a significant proportion of the assets from equities to bonds.

i) Outline any possible impact on members' benefits of the proposed switch from equities to bonds. (5)

ii) Set out the factors for the trustees to consider when deciding which bonds to invest in. You should assume that the investment market is deep and various options are available. (6)

iii) As the investment advisor, set out other issues the trustees should consider in setting out the overall investment objective and deciding on the asset allocation. (7)

[18]

Q. 3) A major multinational company, which historically ranks amongst the best 5 global companies to work for, is having some attraction and retention issues. The HR Director has suggested that the company should look to introduce a flexible benefit scheme for its employees. You have been appointed as an advisor to help the company design and implement the flex scheme.

i) Set out the general considerations before introducing a flex scheme and how this scheme may help to meet your client's objectives. (8)

ii) One of the proposals for flex benefit design is for employees to be able to interchange between the following:

- Salary
- Annual Leave
- Insurance benefits (life and medical)

Outline the key risks and issues the company should consider in relation to the design and operation of this flex scheme. You should provide examples based on the above scheme design. (8)

[16]

Q. 4) A large defined benefit pension scheme provides an increasing pension benefit on retirement. The membership includes pensioners and deferred pensioners. The employer wants to reduce the longevity risks in the scheme and is considering the use of Insurance products.

i) Suggest suitable Insurance products that could be used and explain how the features of these products could reduce the longevity risks. (3)

You are the Actuarial Advisor to the Trust. The Trustees have asked you to explain them the use of the insurance products for transferring the risk.

ii) Outline the advantages and disadvantages of using the Insurance products identified in part (i) to reduce the longevity risk. (4)

One of the trustees has suggested the following two options to reduce the risks instead of using Insurance:

- One-off increase to the pension of the pensioners in exchange for all future pension increases.
- A higher than normal transfer value to encourage the deferred pensioners to leave the scheme.

The trustees have again asked your advice on the above two options.

iii)

a) Discuss the merits of each offer. (3)

b) Outline the factors needed to be considered in determining the design for the offers. (6)

One of the other trustees has asked about the use of longevity bonds or longevity swaps in reducing the longevity risk.

iv) Discuss the advantages and disadvantages of purchasing longevity swaps and longevity bonds to reduce the longevity risk of the scheme. (4)

The deferred pensioners are worried of the future uncertainty during their post retirement period if they leave the scheme now by getting the transfer value; however, they want to assess the creditworthiness of the employer now to take the decision.

v) List the commonly used sources of information available to help assess a employer's credit quality. (3)

The trustees have assured that the employer's covenant is not an important issue here.

vi) List with examples where the sponsor covenant is usually not considered an important issue. (4)

[27]

Q. 5) A small company is in the process of major restructuring. The company wants to hire the new Key Management Personnels (KMPs) and is finalising the pay package of two KMPs for their two key positions. The Company wishes to appoint an experienced person aged 50 as their new Chief Executive Officer and another experienced person aged 45 as their Chief Finance Officer. The potential KMPs have asked the company to guarantee them a pension of Rs. 50 Lacs and Rs. 75 lacs respectively per year from age 60 onwards. The company is considering how it might finance these benefits.

i) List four approaches to the timing of the company's payments to meet these benefits, and outline how any surpluses or deficits could be removed under each approach. (5)

The company decides to use the pay as you go approach.

ii) Discuss the effect of this on the amount of capital that the company requires in order to operate its business. (7)

After the board meeting, the company now decides that it cannot accept the risk of the guaranteed pension. Instead it is agreed that these KMPs will receive a higher salary and need to make their own pension arrangements.

The KMPs ask the Actuarial advice on the amount of contributions they should pay to meet their respective target pension.

iii) Describe the additional information required from the individual KMPs in order to enable an advisor to give suitable advice. (7)

iv) Outline the broad points that would be made when presenting the advice. (4)

[23]

****