INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

18th May 2009

Subject SA4 – Pension and Other Employee Benefits

Time allowed: Three hours (9.45* - 13.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. Please read the instructions on the front page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception

2. * You have 15 minutes at 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 answer sheet until instructed to do so by the supervisor

4. The answers are expected to be India Specific application for the syllabus and corresponding core reading. However, substantially the core reading material is still taken from material supplied by Actuarial Education Company which are meant for UK Fellowship examination. The core reading also contains some material which is India Specific, mostly the IRDA regulation. In view of this, it should be noted that focal point of answers is expected to be India Specific application. However if application specific to any other country is quoted in the answer the same should answer the question with reference to Indian environment.

5. Attempt all questions, beginning your answer to each question on a separate sheet.

6. Mark allocations are shown in brackets.

AT THE END OF THE EXAMINATION

Please return your answer book and this question paper to the supervisor separately.

Q. 1) XYZ is a large public sector oil company in India running a contributory pension scheme for about two decades.

Following are some of its features;

a) Pension accrual rate	- 1.25 % of final pensionable salary
b) Pensionable service	- Each year's completed service after introduction of the scheme
c) Pensionable Salary	- Current annual salary
d) Final Pensionable Salary	- Average of last six months pensionable Salary
e) Normal Pension Age	- Normal retirement age which is 60 years
f) Normal Pension Benefit	- Accrued pension for 15 years certain and for life thereafter
g) Commutation (Optional)	- One-third of the accrued pension
h) Employee contributions	-i) Changes from time to time as recommended by the actuary. Currently 19% of pensionable salary; plus ii) 50% of the uniform allowance, being given by employer, which is currently Rs 30,000/- per annum per member
i) Employer's contribution	- Rs 5,000/- per annum
j) Death in service benefits	- 100% of member's accrued pension
k) Early Retirement benefit (After completion of at least 10 years membership of the scheme & reaching 50 years of Completed age)	- Accrued pension reduced by 4% per annum retired early subject to a maximum Reduction of 30%
l) Ill health pension	- Unreduced accrued pension

m) Withdrawal benefit

i. Within first 5 years after joining the scheme	- Return of member's contribution without interest
ii. After 5 years but before eligibility of early retirement benefit	- Return of member's contribution with interest declared by trustees from time to time on the advice of the actuary of the scheme

Membership of the scheme is compulsory for new employees. Pension as and when becomes payable is purchased from a life insurance company. There is no family pension benefit on death after retirement. However, at the time of vesting of pension, members are given following pension options:

- Pension payable for life only
- Pension payable for life with return of capital on death
- Pension payable for life of the member reducing to 50% for spouse payable on death of the member
- Pension payable for life increasing at the simple rate of 3% per annum

The scheme remains cost neutral in respect of optional benefits of the commutation and pension options and utilizes the rate of Normal Pension Benefit at the time it is due for payment.

You are the actuary for the scheme and have been advising the trustees on valuation and other matters for last 5 years. Recently some new officers have joined the company who have approached the Finance Director (who is also one of the trustees) on the issue of their compulsory joining. According to them the contribution being charged under the scheme is very high. They told him that these days many life insurance companies have introduced attractive pension plans and as per their calculation for 50% final salary under such plans, they need to contribute less than 15 % of their salary. They are also offering much better withdrawal benefits.

Finance Director went through their working and was satisfied with their arguments. He assured them to look into the matter. He then discusses it with his fellow trustees and finally writes to you in the matter.

a) With this background, in order to prepare a reply for the Finance Director you are required to:

(i) Identify the unusual features of the scheme and summarise your comments with reasons for the same. (7)

(ii) Outline the points to be included in the reply to the Finance Director explaining him why the rate of contribution currently being charged does not reflect the value of benefits of the individual members (13)

b) On receiving your reply, the Company decides to use an approach which expresses the approximate cost of benefits available under the scheme as a percentage of the employee's salary. Discuss the issues to be considered in this approach and also in setting the assumptions to be used to determine the relevant table of contribution rates. (18)

c) Meanwhile, an insurance adviser approaches the Finance Director with a proposal to transfer their pension fund to his insurance company. He told that his company offers Deposit Administration Plan and Unit-Linked Contracts with different fund options. He has also given details of the yield provided by his company's different unit-linked funds which has been more than 12% per annum during each of last four years.

Finance Director has asked you to prepare a report explaining different contracts offered by the life insurer and their suitability to their scheme. Outline the points you would make in your report. (12)

[Total 50]

Q.2) The Trustees of a contributory and multi-employer Employee Pension Scheme under an Act of Parliament have engaged you to prepare a report aimed to explain certain aspects of the scheme to the Trustees and the Employers, constituents to the scheme. The explanation is required under various issues relating to the determination of liability, rate of contribution for funding and financial reporting in the books of accounts of the employers, particularly in the backdrop of the Accounting Standard 15 (rev.2005). The Pension scheme has the following characteristics amongst others:

a) Defined Benefits final salary where, benefits accrual is a function of service and salary, and the benefits are paid as life annuities (with spouse's life pension on death of the member/pensioner), out of the fund but option to purchase annuities from life insurer/s by Trustees. Pension to increase at the discretion of Trustees in line with cost of living, generally benchmarked with salary increases.

b) Option available to members to be exercised before inception of the pension to reduce the pension to the extent of ten percent in favour of lump sum payable on death equal to one hundred times the monthly pension forgone.

c) Contribution is a percentage of Salary and is reviewed at interval of three years based on actuarial reports, through amendment to the Act/Rules, if recommendation is accepted by the Government..

d) Asset allocation is required to be in accordance with specifications as applicable to Employees' Provident Funds administered by EPFO under Employees' Provident Fund and Miscellaneous Provisions Act, 1952.

e) The employers contributing to the scheme are engaged in same occupation but are having individual legal structure as a Company under Indian Companies Act 1956.

f) The Scheme Rules provide for Actuarial Report once in three years, for assessing solvency of the fund and making recommendations on the contribution rate.

g) The Scheme currently has in total more than about six lacs employees and about four lacs pensioners.

You are an Actuary and also render actuarial advice including preparing reports for expensing under Accounting Standard 15 (rev. 2005) to some of the employers participating in the pension scheme.

1) The Trustees have asked you to include responses to the following questions in your report;

a) The Objectives of the AS 15 (rev.2005) and whether it applies equally to the Employer Entities as well as to the Employee Benefit Plans. (2)

b) What are the Categories of Employee Benefits to which the AS 15 (rev.2005) applies? (3)

c) While explaining the concept of Defined Contribution (DC) and Defined Benefits (DB) Plans, analyse whether the obligation of the Employers to contribute at a rate of contribution determined under the Statute will constitute DC or DB for measurement and disclosure. (5)

d) Concept of and causes for Actuarial Gains and Losses as these are recognized in the Profit and Loss. (2)

e) Many of the employers constituting the Pension Scheme have been expensing the contributions made to the pension fund for preparation of the financial statements so far. The Financial Officers of these employers have asked for this practice to be changed quoting the Accounting Standard 15 (rev.2005). While stating the aims of the most of the pension related Accounting Standards, discuss the problems that are caused if the amount of contributions that a company actually paid in to the scheme is reported as the "cost" of the benefits in the company's account. (4)

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2) Trustees have requested you to make a presentation to them as a preparatory exercise to the next Triennial Valuation on a number of aspects of the valuation exercise. As part of this presentation respond to the following;

a) List the possible sources of surplus (deficit) and prioritise with reasons the listed items in order of likely magnitude as sources of surplus (deficit). (8)

b) Illustrate the movement of Actuarial Liability over the inter-valuation period by a recurrence equation defining the symbols used. (4)

c) Discuss the relevance of future service cost in analysis of surplus and the cost of benefits accrued over the inter-valuation period, keeping in view the valuation method and any other method to determine the amount of accrued benefits. (4)

d) Discuss the method/s by which value will be placed on the group immediate annuities purchased by Trustees while placing a value on the assets of the Trust Fund. (3)

e) Discuss the method/s by which value will be placed on the paid up non-profit and paid up with profit group deferred annuities purchased by Trustees while placing a value on the assets of the Trust Fund. (4)

f) List examples of accrued benefits funding methods describing in brief each of these methods. (6)

g) Discuss the need for and appropriateness of setting assumptions for the funding valuation with "degree of prudence" as against "best estimate" assumptions under AS 15 (rev.2005). (3)

h) Give examples of scenario under which it is prudent to assume that husbands are three years older than their wives instead of four years older.

(2)

[34]

[Total 50]

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