INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

3rd November 2008

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) A ten year old private company employing about 650 employees in India approached an Actuarial Consultancy firm to suggest design of a final salary pension scheme for its employees keeping certain cost in mind. The company's variable pay does not exceed 10% of the fixed salary and it pays other statutory benefits and contributes 12% of the salary towards Provident Fund.

The Firm has suggested following design:

a)	Normal Pension Age	- 60 years for both males and females
b)	Pension Accrual Rate	- 1/60 (Final Pensionable salary less one and half times EPS Pension)
c)	Pensionable Service	- Each year's completed service after the Scheme is introduced.
d)	Pensionable Salary	- Current Annual Salary
e)	Final Pensionable Salary	- Average of last five Pensionable Salaries
f)	Pension Increases	- Guaranteed increases in line with Consumer Price Index (CPI) increases
g)	Employee Contributions	- 3. 67% of Pensionable Salary
h)	Death in Service Lump Sum	- 1.5 X Pension able Salary
i)	Death in Service Family Pension	- 50% of member's pension based on prospective service
j)	Family Pension on Death after Retirement	- 50% of member's pension at death
k)	Withdrawal Benefit	- Deferred pension without revaluation or transfer value equal to member's own contributions with interest at bank rate , as opted by the member
l)	Early Retirement Benefit	- Available at option of the employee after age 50 years. Reduction in pension will be 3% per annum retired early.
m)	Ill – health Pension	- Unreduced Immediate Pension
n)	Commutation	- Half of the pension as per fixed multiples
o)	Late Retirement Pension	- Available at the option of employee, after

normal pension age, upto age 65. Pension calculated as per normal formula or pension at normal pension age actuarially increased for late payment.

The Management of the company discussed the suggested scheme in its Board meeting where some of the Board Members desired that the company should take opinion of another actuarial consultant. The Company then approached you to suggest your point of view on the scheme design suggested by the firm and also to comment on any other features of the pension scheme that are unusual.

i) Discuss and describe the points you would include in the draft of your reply. (30)

ii) Discuss and describe how the weaknesses of the pension scheme, if any could be remedied without substantial increase in cost of the scheme for the company. (20)

(You may assume that the professional conduct does not prevent you from commenting on the work of another actuary. Further EPS stands for Employee Pension Scheme, 1995)

[Total 50]

Q. 2) A Multinational group owns a life insurance company as well as has wholly owned subsidiaries in other financial sectors in India. The Life insurance Company, aside from individual life, pension and annuity business conducts group life business. The Life insurance company, as also other subsidiaries have their own approved Superannuation schemes some of which are self-administered and some are insured with the group's own life insurance company. The Group CFO and Group Actuary of the Multinational have had review of superannuation and other benefits arrangement with the trustees of different schemes in India. As a result of this review number of issues have arisen requiring assistance to understand these issues and their implications. You are an Actuary and Benefits Consultant and have been engaged to assist answering these issues and explain the implications. In this background please respond to the following issues;

a) **Describe** the need of Trustees and members of schemes for valuation of the pension arrangements whether under Defined Benefit and/or Defined Contribution superannuation scheme/s or as policyholder of life insurance company. **[3]**

b) The report, interalia, is to cover various aspects of advice to an individual member including but not limited to advice on affordable level of future contributions, estimating the level of benefits for a given level of contribution and comparing the benefits needs as against the estimated ones. **List** the reasons as to why the actuarial assumptions will be different for such an advice compared with the actuarial assumptions required for valuation of an approved Superannuation scheme. **[2]**

c) While **stating** the aims of the most of the pension related Accounting Standards **discuss** the problems that might be caused if the amount of contributions that a company actually paid in to the scheme was reported as the "cost" of the benefits in the company's account. **[3]**

d) **State and describe** the fundamental accounting concepts to which the reported pension costs should be consistent and within these concepts **describe** the following under provisions of IAS 19 (amended Dec.2004); (1.5)

i. The method of calculating the pension cost, (2)
ii. The method of calculating the amount to be recognized in the balance sheet, (2)
iii. The full list of required disclosures. (4)

[9.50]

e) i. In case of defined benefit schemes covered under Group Gratuity or any other defined benefit scheme with an insurance company, where the actuarial and investment risks have not been transferred from the enterprise, whether an enterprise can rely upon the actuarial valuation certificate provided by the insurance company or a separate certificate from a "qualified actuary" is required to be obtained for determination of the actuarial liability. (2)

ii. In case the rules of an enterprise provide that no gratuity would be payable if an employee leaves during first five years of service, whether the enterprise is required to create a provision in respect of gratuity payable during the first five years of service of an employee. (2)

iii. In case an enterprise was not creating full provision for retirement benefits, such as, gratuity, pension, etc., as per requirements of AS (15), how should the amount of under provisioning be treated? (2)

iv. In case an enterprise was not creating appropriate provision(s) for employee benefits, such as, sick leave etc., which are not covered in the AS 15 whether the transitional provisions of AS 15 (rev.2005) can be applied to the entire liability arising on the first application of the AS 15 (rev.2005). (1.5)

v. **List** the inputs and process involved for using Black's model for valuing interest rate guarantee under "exempt" Provident funds. No illustration of the application is required. (4)

[11.50]

f) Suggestion has been made that while taking a view on the total employee benefits programme, the benefits under EPS, '95 which are considered as a social security measure by the Government and any other social security programme of the Government, should be factored in to the recommendations. When valuing these programmes, describe key elements of the Guidance Note of the Institute of Actuaries of India on the Actuarial Practice for Social Security Programmes, which have to be taken in to account. **[7]**

g) Arising out of recent actuarial valuation the Trustees of the Defined Benefit Approved Superannuation Scheme have been concerned with the sources of surplus and whether or not to insure some or all the benefit obligations of the scheme. It has also been proposed that the death benefits be insured through group insurance and the pensionary benefits be insured by purchasing non-profit annuities. In this context prepare response to the following issues raised;

i. **Describe** considerations that would go in to deciding the value of insurance programme and the methods of assessing the risks within the scheme. (5.00)

ii. **Describe** difference between experience rating and profit sharing for the benefit of Trustees (2.50)

iii. **List** the risks that the scheme protects itself against through the purchase of a non-profit annuity. (1.50)

iv. **Describe** methods of analysis of surplus and explain the relationship between various sources of surplus and financial implications of various assumptions that are made for the valuation. Also **explain** as to how the funding method affects the procedure used for surplus analysis. (5.00)

[14]

[Total 50]

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