INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

27th May, 2013

Subject SA4 – Pensions & Other Employee Benefits

Time allowed: Three hours (14.45* - 18.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

i) *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*

ii) ** 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.*

iii) *You must not start writing your answers in the answer sheet until instructed to do so by the supervisor*

iv) *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.*

v) *Attempt all questions, beginning your answer to each question on a separate sheet.*

vi) *Mark allocations are shown in brackets.*

vii) *Please check if you have received complete Question Paper and no page is missing. If so, kindly get new set of Question Paper from the Invigilator.*

AT THE END OF THE EXAMINATION

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

Q. 1) A large manufacturing firm based in Germany is looking to acquire an Indian manufacturing company. The target is an old Indian company providing multiple employee benefits besides the mandatory Gratuity and Provident fund benefits. The acquirer has a small legal entity in India and the target, if successfully acquired, would fold into the existing legal set up.

The acquiring company is concerned about the risks that may be underlying these benefit liabilities and hires your firm to assist with the due diligence. You are a qualified Actuary and hold a senior Consulting position within your firm.

From the data room information you understand that the following benefits are being provided by the Indian Company being acquired.

1. Gratuity
2. Provident fund
3. Leave encashment
4. Sick leave
5. Post-retirement medical benefit (PRMB) &
6. Defined benefit pension

The following liability information besides copies of actuarial certificate is available in the data room;

1. Number of employees covered by the Gratuity and Leave encashment benefits : 2,200
2. Gratuity liability as per 31 March 2013 Valuation: INR 45 crores
3. Leave encashment liability as per 31 March 2013 Valuation: INR 25 crores
4. Number of employees covered by the Post-retirement medical benefit and Defined benefit pension is 800 as only the unionized employees are eligible for these benefits
5. PRMB liability as per 31 March 2013 Valuation: INR 18 crores
6. DB pension liability as per 31 March 2013 Valuation: INR 20 crores

On examination of the actuarial certificates, it is found that the following bases have been used for valuations as at 31 March 2013

1. Salary escalation: 5%
2. Medical inflation for the PRMB benefit : 4%
3. Mortality : LIC 94-96 modified Ultimate
4. Attrition : 4% across all ages

Also the benefit provisions are as below;

1. **Gratuity:** as per Act provisions for service less than or equal to 10 years and allows higher accrual at 21 days for service greater than 10 years with no ceiling on benefit payable. Gratuity is funded and the funding level is 75% as at 31 March 2013

2. **Leave:** annual entitlement at 30 days, maximum accumulation – 90 days, encashment formula – leave accumulation * leave salary/26

3. **Sick leave:** annual entitlement at 12 days, maximum accumulation – 45 days, encashment formula same as Privilege leave

4. **PRMB:** hospitalization cover of INR 500,000 to member and spouse for life post retirement and payable only on retirement

5. **DB Pension:** INR 1,000 for every year of service subject to a maximum of 50% of last drawn pay payable for life only on retirement

The existing legal entity in India of the acquirer provides only the mandatory Gratuity and Provident fund benefits.

You have been asked to provide:

i) A due diligence report addressed to the management of the acquirer covering;

- **a.** The nature and extent of the risks under each of the defined benefit schemes demonstrated with sample calculations in the context of the benefit liabilities along with commentary on the current assumptions that has been used for the valuations. (20)

- **b.** Data that would be required and analysis that needs to be done to validate the current assumptions being used (5)

- **c.** Significant differences between Indian and IFRS accounting for the year ending 31 March 2013. (5)

ii) The acquirer would also want to understand the options for transferring the defined benefit schemes and financial implications. Provide at least three options for transferring each benefit provided by the target into the existing Indian legal entity of the acquirer and the pros and cons of each option from the perspective of the target company, the employees concerned, the acquirer and the legal entity of the acquirer (20)

[50]

Q. 2) A large multinational company in India is currently reviewing its compensation and benefits policy to be in line with global practices. The company has appointed you as the Consulting Actuary for this review. You have presented your report to the management and recommended introducing a *'Flexible Benefit Scheme'* where the employee could choose the type and level of benefit for a total *'Annual Benefit Amount'*. The program will cover both Statutory and Other benefits of the company including Provident Fund, Gratuity, Leave, Life Insurance and Health Insurance.

i) Describe briefly the concept of *'Flexible Benefit Scheme'* and how it could be structured. (4)

ii) Suggest with a reason four benefits which the employees must compulsorily choose. (4)

iii) You have also included in your report how the company should price for each benefit, which need to be deducted from the *'Annual Benefit Amount'* in case a particular benefit is chosen. (6)

List the factors which you might have considered in arriving at such a price.

iv) Explain the Black's Model for valuing interest rate guarantees in exempt provident funds. (8)

v) The company operates a gratuity benefit scheme as per the Payment of Gratuity Act, 1972 (*'act gratuity'*). The plan has been funded with an insurance company. The fund is in surplus as per the insurance company's latest actuarial valuation. (4)

List the tax benefits to the employer and the employee for a funded gratuity benefit scheme.

vi) The company has suggested the contribution rate currently paid to the insurance company should be used as the price of the gratuity benefit in the *'Flexible Benefit Scheme'*. (6)

Comment on the suitability of using the current contribution rate as the price.

vii) List two alternative methods of pricing for the gratuity benefit and their suitability. (2)

viii) Briefly explain the choice of assumptions as covered under IAI Guidance Note 11 (6)

ix) The company wishes to introduce an *'added years gratuity'* option under the Flexible Benefit Scheme wherein the members can purchase additional years of gratuity. This benefit would be over and above the *'act gratuity'* as mentioned earlier. The additional years of gratuity will be calculated and paid separately with no gratuity ceiling involvement. (6)

Discuss the actuarial basis and assumptions that you would use for determining the price of *'added years gratuity'*

x) Discuss the problems associated with having the Gratuity Plan as being part of the *Flexible Benefit Scheme'* (4)

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