INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

16th March 2018

Subject SA4 – Pensions & Other Employee Benefits

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

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions inside the cover 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 you are required 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 is meant for UK Fellowship examination. The core reading also contains some material which is India Specific applications or work carried out from within India, mostly the APS/GNs issued by ASI/IAI, Accounting Standards by ICAI, Indian Tax and other relevant documents and funding or accounting standards issued by other bodies outside India. In view of this, it should be noted that focal point of answers is expected to be India Specific application for work generally carried out of India. However if application specific to any other country is quoted in the answer, the same you should answer the question with reference to Indian environment.*
5. *Attempt all questions in order of sequence.*
6. *Begin answer to each question on a separate sheet, however answer to sub-questions can be on the same sheet.*
7. *Mark allocations are shown in brackets.*
8. *Please check if you have received complete Question Paper and no page is missing. If so then kindly get new set of Question Paper from the Supervisor.*

AT THE END OF THE EXAMINATION

Please return your answer book and this question paper to the supervisor separately. You are not allowed to carry the question paper in any form with you.

Q. 1) A company has an exempt Trust that provides benefits in line with the Employee's Pension Scheme 1995 ("EPS95"). The CFO of such Company has recently become a Trustee of the Company's exempt Scheme. The CFO understands that such exemptions are rare. She has approached you to explain certain issues related with such Schemes.

Set out the points you would make that cover:

i) An overview of the main features of the EPS95 as administered by the EPFO (5)

ii) Describe the various different methods of measuring the funding level and the contribution rates required for the Company's exempt EPS95 Scheme in determining its financial position. Also give an outline of the circumstances under which different methods will be most suitable. (10)

iii) Discuss the considerations to be borne in mind by the Company when deciding whether or not the exemption should be continued. (5)

iv) Detail the approach you would take; if you were asked to conduct an asset liability exercise (8)

v) List the relevant parts of APS27 that you would need to comply with when conducting the asset liability exercise (7)

The EPFO has very recently published a notification and circular mentioning that the members of EPS95 as administered by the EPFO should be given a onetime option to increase their EPS95 benefits to be based on an uncapped PF salary. The Company currently pays contribution into EPS95 exempt scheme at the rate of 8.33% of PF Salary up to the earnings threshold of Rs 15,000 per month.

vi) What are the potential implications of this announcement for
a) Employees (2)
b) Trust (3)
c) Company (2)

vii) Using the particulars of following employee covered under the Company's exempt Scheme, outline the estimated present value of the potential additional cost to the Company for that employee, if she opts for increasing her EPS95 benefits based on uncapped PF salary.

Particulars:

Age at entry: 25 years
Year of Entry: 1996
PF Salary at Entry: Rs 15,000 per month
Assumed threshold on PF Salary for EPS95: Rs 15,000 per month
Assumed contributions by employer to EPF over all: 12% of uncapped PF Salary
Average EPF return in past and estimated in future: 8.5% p.a
Salary increase: 8% p.a.
Approximate cost of Rs 1 p.a. pension at age 58 (includes survivor benefits): 15
Discount rate: 7% p.a. (8)

[50]

Q. 2) "ABC", a multinational company operating in FMGC Sector has established its business operations in India few years back. Considering the robust growth in Indian economy, it plans to expand its business operations in India by acquiring some of the smaller companies operating in the sector. It is gathering market intelligence on some of "target" companies" it intends to buy. As a part of the process it examines the financial statements of such companies available in the public domain.

The following table is an extract of the AS 15 (R) disclosures of one of the target companies "XYZ". As an actuarial consultant, you have been engaged by the Company ABC for valuation of the retirement benefits of Company XYZ in the acquisition process:

(figures in million)	**Pension**		**Gratuity**	
Particulars	**CY**	**LY**	**CY**	**LY**
Amount Recognised in Balance sheet				
Present Value of Funded obligation as at 31st March 2017	67824.90	59151.41	7291.02	7332.14
Fair value of plan assets	64560.42	53140.37	7281.18	6879.77
Net liability	**3264.48**	**6011.04**	**9.84**	**452.37**
Net cost recognised in Profit & loss account				
current service cost	715.64	843.64	151.08	128.33
interest cost	4767.60	4237.68	576.31	589.67
Expected return on plan assets	-4304.88	-4269.75	-540.75	-618.59
Other items	1196.91			
Actuarial loss	4279.01	6375.10	45.61	494.10
Total cost recognised in Profit & loss account	**6654.28**	**7186.67**	**232.25**	**593.51**
Actuarial gains/losses				
on plan assets	2246.60	-162.93	182.34	-43.04
on benefit obligations	-6525.61	-6212.17	-227.95	-451.05
Total	**-4279.01**	**-6375.10**	**-45.61**	**-494.09**
Contribution paid	**6771.00**	**1400.54**	**674.78**	**213.24**
Principal actuarial assumptions				
Discount rate	7.45%	8.06%	7.27%	7.86%
Expected return on plan assets	7.45%	8.06%	7.27%	7.86%
salary escalation	5.00%	5.00%	5.00%	5.00%
Category of Assets				
Central & State Government Securities	60%		50%	
Debt Securities, Money market securities & bank deposits	35%		22%	
Insurer managed funds	0%		23%	
others	5%		5%	
Total	**100%**		**100%**	

i) Based on the information available in the table, draw inferences about the financial and other characteristics of the retirement benefits offered in the company “XYZ” (13)

ii) Discuss the additional information and data needed during the “due diligence process” to place a value on the retirement benefits of company “XYZ” in the acquisition process (“Due diligence process” usually takes place when progress is made on the acquisition and the company XYZ will be willing to provide company ABC access to more detailed information) (12)

During the “due diligence process” the following information becomes available to the company ABC on the pension scheme of Company XYZ.

Category of members	Proportion of accrued benefit liability	Salary/pension as at CY per month	Average age	Number of members	Future average term
Active members	86%	Rs.60000	40	32500	12
Deferred members	5%	Rs.6000	45	9000	13
Pensioners	9%	Rs.10000	65	4000	10
Total	100%			45500	

The formal talks for the acquisition process have started between the two companies. During the talks, the companies are able to reach an agreement on most of the aspects of the valuation of the company (including valuation of gratuity benefits). But Company ABC is concerned with the “uncertainties” associated with the cost of the pension scheme provided by Company XYZ.

Therefore it proposes that either

a) The accrued, vested pension benefits will remain with Company XYZ and the company ABC will provide benefits only in respect of the future benefits.

OR

b) It agrees to take the entire pension scheme (including past service benefits) provided the deficit is removed and the funding level turns into surplus by 20 % on an actuarial basis as agreed between the two companies.

iii) Discuss the proposal (a) from the objective of company ABC & XYZ in arriving at a consensus on the deal- the practical difficulties of implementing the proposal post merger (8)

As a consultant actuary, you have been engaged by company XYZ to discuss the proposal under (b)

iv) **a)** List several ways of removing the deficit and generate surplus under the scheme (before merger deal is finalised) (4)

As part of the exercise under (b) the company is offering an option to “Deferred members” of the pension scheme an option to move to NPS whereby “ä transfer value” will be credited to the individual pension account of the members.

b) Discuss the actuarial and other factors to be considered while determining the transfer value to be credited into the scheme. (8)

Another option is also being contemplated by Company XYZ whereby “pension” of the existing pensioners will be reduced by 25%. But on the death of the pensioner, a lump sum equivalent to 50 times of the monthly pension will be payable to the nominee of the pensioner. This will, of course, be on optional basis.

v) Calculate the cost saved in the pensioner category assuming 50% of the pensioners exercise the option.

Cost of providing pension of Rs.1/- per month under life pension = Rs 146.00

Cost of providing pension of Rs.1/- per month under life + ROC option = Rs 171.50 (5)

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