INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

7th September 2018

Subject SA6 – Investment

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, 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 candidate 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.***
7. ***Please check if you have received complete Question paper and no page is missing. If so, kindly get a new set of Question paper from the Invigilator.***

AT THE END OF THE EXAMINATION

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

Q. 1) You are the Actuarial Consultant to the Board of Trustees for a large defined benefit fund run by a leading PSU manufacturing company. The fund is currently under deficit (value of liabilities far exceeds the value of assets). The defined benefit pension plan is closed to new entrants and future accrual. It is considering how to manage its deficit that has ballooned over the years.

The CFO has asked the Trustees to consider using Insurance Transfer as an option to manage the deficit risk arising within the fund.

i) What are the factors that the Trustees need to consider between retaining the liabilities within the pension fund itself as opposed to transferring these to an insurance company?

Your answer should include the risk and issues arising in managing the fund by employer versus the insurance company, cost related issues in transfer and impact of transfer on the pensioners. (25)

If the Trustees decide to maintain the current pensions in payment within the fund – then they need your help in assessing methods to deal with the assets backing these liabilities. The trustees aim to grant increases to pensioners equal to CPI over rolling 2 year periods. One of the key members in the Board of Trustees has asked your views on cash-flow matching.

ii) Explain the concept of cash-flow matching and how a cash-flow matching strategy can be implemented using bonds or swaps. (10)

iii) One of the trustees has asked you to explain to them the pros and cons of a full match to guaranteed cash-flows (including inflationary increases) and partial match to the same. Outline the points you would mention in your response. (10)

Since the Trustees are targeting increases to pensions in payment with respect to CPI index – they are concerned about the potential inflation risk that could arise within the scheme. The Company also has a defined contribution retirement benefit scheme for new joinees post closure of the above fund towards new entrants.

iv) One of the trustees is curious about inflation hedging. Explain the differences between expected and unexpected inflation also indicating which is easier to hedge with rationale. (2)

v) Inflation impacts both assets and liabilities - explain its impact on the company's pension arrangements. (8)

vi) Outline the considerations the trustees and Sponsor/Trustees should make in deciding whether or not to hedge the inflation risk in the defined benefit scheme. Outline the pros and cons of investing in asset classes (including derivatives) to hedge against inflation risk. (15)

[70]

Q. 2) Recently SEBI the market regulator has announced categorization and rationalization of mutual funds.

As per the circular, SEBI has demarcated a total of 36 categories under 5 broad groups

Equity Schemes (10categories)
Debt Schemes (16 categories)
Hybrid Schemes (6 categories)
Solution Oriented Schemes (2 categories)
Other Schemes (2 categories)

i) Give 2 main advantages of why SEBI has proposed this? (1)

ii) What benefits and issues will this create for existing investors? (2)

iii) As an individual investor in mutual funds, what would be the steps you would take for your portfolio which has more than 50 funds? Outline the key challenges you will face in doing so. (5)

iv) What is the impact on Fund Houses? (4)

[12]

Q. 3) In December 2017 IRDAI issued the guidelines regarding PE investment in insurance companies. The IRDAI Guidelines are applicable to unlisted Indian insurance companies and the PE funds (PEF) that have invested in unlisted Indian insurance companies either as an "investor" or as a "promoter".

i) What are the key conditions applicable to PEFs investing in Indian insurance companies as a "promoter"? Include in your answer with respect to :

- Ceiling proposed
- Lock in period if PE fund wants to be a promoter (6)

ii) What are key differences to PEFs investing in Indian insurance companies as a "Investor"? (2)

[8]

Q. 4) You are an investment consultant. You have a varied client base from insurance companies to pension funds.

The Chairman of Trustees of an India based charitable foundation supporting local projects has approached you. The Chairman of that board has recently read that infrastructure developments in the country have created an excess demand for commodities such as copper with prices reaching historic highs. He also met a group of local property developers who assured him that the boom was certain to continue for many years and that smart investors were buying up investments in raw material supplies to benefit from rising prices due to future demand. He wants you to prepare a report for the Trustees recommending the appropriate allocation of the foundation's assets to commodities.

i) Describe the information you would require on the foundation? (4)

ii) Explain how this information would be used to develop a framework for assessing the appropriateness of commodities investment for the foundation's investment fund. (6)

[10]

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