INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

27th May, 2014

Subject SA5 – Finance

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

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 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 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) Recently the RBI governor commented that we should target at controlling the Consumer Price Inflation (CPI) and not Wholesale Price inflation (WPI).

i) Distinguish between CPI &WPI and comment on his statement (3)

ii) What are the key instruments RBI would use to control the inflation? How would they help in controlling inflation? (6)

iii) Briefly explain whether the high interest rates prevailing in the Indian market are the consequence of high inflation rates. (4)

You are the Appointed Actuary of a medium sized life insurance company in India. In that capacity you are also a member of the Investment Committee of the company.

In the forthcoming Investment Committee meeting, the Chairperson of the Investment Committee wants you to present your views on the recent trends in the Indian economy and how these trends would impact the short to medium term outlook for the Indian life insurance industry.

iv) Outline the key themes you would cover as part of this presentation (12)

In the Investment Committee meeting, after hearing your presentation, one of the members makes a comment that "the high interest rates prevailing in the Indian economy are good for life insurance companies".

v) Outline the key points you would make while commenting on the pros & cons of her statement covering the following aspects: (10)

a) Investment of assets

b) Pricing of traditional products – both par and non - par

c) Valuation of liabilities – both par and non-par

Another member of the Investment Committee opines that the prevailing high interest rate environment is not sustainable over the long term and is of the view that the over the next two to three years, there will be a significant fall in the long term interest rates. He wants to know the impact of fall in interest rates on the solvency capital under the current solvency [Solvency I] requirements and under Solvency II requirements [assuming that the Solvency II requirements will be mandated for Indian Life Insurance Companies within the next two to three years]

vi) Briefly discuss the key sources of capital for life insurance companies – both in the global context and in the Indian context. As part of your answer distinguish between the different tiers of available capital (5)

vii) Outline the key differences between Solvency I and Solvency II capital requirements (4)

viii) Briefly discuss how lower interest rates would impact the valuation of assets and liabilities of a life insurance company selling only traditional products – both par and non-par. Assume that the policyholder funds of the company are invested in accordance with the investment pattern mandated by IRDA. (7)

Assume that the solvency capital requirement [SCR] for the life insurance company has to be estimated using the standard formula approach prescribed under Solvency II framework.

a) Discuss the methodologies used [under the Solvency II framework] for estimating the solvency capital requirement for market risk (6)

b) Explain the methodology you would use for assessing the solvency capital requirement for interest rate risk (3)

[60]

Q. 2) Your firm is hired as a financial consultant to a global fast moving consumer goods conglomerate, Water Melon Limited. As part of your remit, you are required to advise the Board of Directors on the most effective deployment of the firm's available capital base.

One of the options considered by Water Melon is to acquire Mango Private Limited, a supply chain management firm, which offers an excellent fit with Water Melon's current business portfolio.

i) Discuss the plausible reasons for mergers and acquisitions (6)

ii) List the information that Water Melon needs to evaluate the future net cash flow accruing to its shareholders as a result of the acquisition of Mango. Briefly describe the approach you would use for valuing these net cashflows from the standpoint of the shareholders' of Water Melon (10)

iii) Water Melon is planning to use one of the following bases for determining the exchange ratio for acquiring the shares of Mango :

a) Earnings Per share

b) Market Price Per Share

c) Book Value Per Share

Evaluate the relative merits and demerits of using each of the above bases for determining the exchange ratio.

Assuming that Mango is an unlisted company and Water Melon is a listed company with the promoters holding 40% of the capital of that company, which of these bases will you recommend for setting the exchange ratio? List the reasons for your recommendation and the assumptions, if any. (8)

The acquisition being contemplated by Water Melon will come under the purview of SEBI’s [Securities and Exchange Board of India] Regulations relating to substantial acquisition of shares and takeovers. These Regulations are referred to as the SEBI Takeover Code.

iv) What should be the guiding principles underlying the formulation of a Takeover code? (5)

v) What could be the salient features [key provisions] of a Takeover Code? (5)

vi) After much effort over a period of eight months, the attempted takeover of Mango Ltd failed. The surplus cash reserve that was to have been used in the Mango takeover is now proposed to be distributed among the shareholders of Water Melon Inc. and the firm announces a substantial hike in the cash dividends paid out to shareholders.

Outline all possible signals that the market may interpret from this management action. (6)

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