

# INSTITUTE OF ACTUARIES OF INDIA

## EXAMINATIONS

21<sup>st</sup> September 2017

**Subject ST5 – Finance and Investment A**

**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 have then three hours to complete the paper.*
3. *You must not start writing your answers in the answer sheet unless instructed to do so by the supervisor.*
4. *The answers are not expected to be any country or jurisdiction specific. However, if Examples/illustrations are required for any answer, the country or jurisdiction from which they are drawn should be mentioned.*
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)** Explain the following terms, with appropriate examples as applicable.
- a) Unit Trust
  - b) Quantitative Easing
  - c) Structured Product
  - d) Straddle
  - e) Private Debt
- [10]**
- Q. 2)** You have recently joined as a credit rating analyst in a reputed credit rating agency. Your manager has asked you to draft a credit report on ABC Ltd, an aircraft manufacturing Company, for a detailed discussion next week.
- i) Explain the distinctive features of ABC Company. (8)
  - ii) List the fundamental factors on which you should focus in your draft credit report and their relation if any from the specific industry. (4)
  - iii) Describe how you would assess the financial strength of this Company. (5)
- To improve the credit quality and acceptability of the debt instrument in order to maximise the potential to raise money, an independent consultant suggested ABC Ltd to either structure it as a collateralized debt obligation (CDO) or provide a collateral.
- iv) What is a collateralized debt obligation? Briefly describe the various forms of tranches that are typically prevalent within a CDO. (6)
  - v) What is your view on the viability of CDOs? Please share your perspective, both pros and cons with any relevant examples. (4)
  - vi) What is a collateral and how does providing a collateral help? What additional aspects would need to be kept in mind while firming up the debt instrument with a collateral in place? (4)
- [31]**
- Q. 3)** A privately-owned online travel company wishes to list itself on a stock exchange.
- i) Discuss in detail all the potential aspects that the Management and the Board should have internally debated and discussed before firming up their plans to list on the stock exchange. (8)
  - ii) Explain the role of the Listing Authorities. (6)
  - iii) The online travel company is approached by the promoter of another travel company, which operates online as well as offline, for a potential merger before listing. What possible benefits could the online travel company get from the merger? List four most important aspects to be kept in the forefront for a successful merger. (6)
- [20]**
- Q. 4)** A Market Capitalization weighted index has been created on March 31, 2016 with just three stocks - X, Y and Z. As on March 31, 2016, the share prices and number of shares were:

Stock	March 31, 2016	
	Share Price	Number of Shares
X	1.00	100
Y	1.25	160
Z	0.90	60

**i)** As on March 31, 2017, the share price of X, Y and Z are 1.15, 1.10 and 0.95, respectively. Calculate the index value as on March 31, 2017, if the index value as on March 31, 2016 was 100. (2)

**ii)** The Company X pays a 10% stock dividend on March 31, 2017. Calculate the index value as on May 31, 2017 if the share prices of X, Y and Z are 1.50, 1.30 and 1.15, respectively. (4)  
[6]

**Q. 5) i)** Explain liquidity risk in the context of a commercial bank. (6)

**ii)** Discuss the techniques / methods used to measure liquidity risk (9)  
[15]

**Q. 6)** You have joined as a senior investment manager in a newly launched life insurance company. The insurer intends to focus on all lines of businesses, including traditional products. The Chief Investment Officer has asked you to draft the investment policy.

**i)** Suggest investment objectives applicable for this company. (2)

**ii)** Discuss on how you would manage these objectives in the investment policy. (6)

A colleague of yours is of the view that investment in derivatives if done with appropriate reporting would help in achieving the investment objectives.

**iii)** Comment on the statement. (4)  
[12]

**Q. 7)** Describe the behaviors' exhibited in each of the following scenarios, with appropriate reasoning.

**a)** Two campaigns were run by an NGO to encourage public on the use of solar energy. The first campaign was "If you switch to solar energy, you will save Rs 6,000 per year". The second campaign was "If you do not switch to solar energy, you will lose Rs 6,000 per year". It turned out that the second campaign was more effective.

**b)** An adventure activity was organized for a group of 100 students. Before the start, the students were asked two questions:

i. How many students would be able to complete this activity?

ii. What is the probability of you completing this activity?

The most common answers were 50% and 90%, respectively.

**c)** In a survey, executives of a company were asked two questions:

i. How happy are you?

ii. How often do you go on holiday?

When the two questions were asked in this order, the correlation between the answers was low. But when the holiday question was asked first, the correlation was quite good. (6)

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