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Roll No.....

**MFR/Sem IV/265 (Spl.)**

**M.F.M. (R.I.) (Semester IV)  
(Special) Examination, 2014-15**

**Basics of Actuarial Science**

**Paper : MFR-523**

***Time : Three Hours***

***Full Marks : 70***

*(Write your Roll No. at the top immediately on the  
receipt of this question paper)*

**Note:** Attempt **all** the questions. All questions  
carry equal marks.

1. Define Actuarial Science and state its  
principles and limitations.

**OR**

Explain the utility theory in the field of  
actuarial science.

P.T.O.

2. Explain the difference between annuity contracts and life insurance contracts.

**OR**

Write notes on the following :

- (i) Discount
- (ii) Premium

3. What do you mean by sampling distribution of statistics ? Discuss its use in statistical hypothesis testing.

**OR**

A bag contains 5 white and 3 black balls. 2 balls are drawn at random one after the other without replacement. Find the probability that both balls drawn are black.

4. Write notes on the following :

- (i) Survival function
- (ii) Force of mortality

**OR**

Discuss in detail the different functions involved in the life table.

5. Write a detailed notes on endowment and deferred insurance.

**OR**

Explain the difference between net and gross premium. How do we calculate them ?