

**MASTER OF BUSINESS ADMINISTRATION IN
FINANCIAL MARKETS
(MBAFM)**

00328

Term-End Examination

December, 2016

**MCT-072 : QUANTITATIVE AND STATISTICAL
TECHNIQUES FOR FINANCIAL MARKETS**

Time : 3 hours

Maximum Marks : 100

Note : Attempt any five questions. All questions carry equal marks.

1. Financial mathematicians investigate markets on the basis of a simple premise; when you price an asset it should be impossible to make money without the risk of losing money, and by symmetry, it should be impossible to lose money without the chance of making money. Elucidate the above statement.

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2. How does Monte Carlo estimation work ? Explain your answer with the help of a suitable example. What are the ways to understand graphical charts ?

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3. How would you implement the statistical techniques in the following ? 20
- (a) Financial Consulting
 - (b) Securities Regulation
 - (c) Imaginary Data
4. Why is the measure theoretic approach so important in finance ? What are its limitations ? 20
5. (a) What do you mean by stochastic orders of magnitude ?
- (b) Throw light on an Option Pricing Model. 20
6. Distinguish between any *two* of the following : 2×10=20
- (a) Expected value and Expected return
 - (b) Population and Sample
 - (c) Gamma and Vega
7. Briefly comment on any *two* of the following : 2×10=20
- (a) Stochastic Portfolio Theory is a flexible framework for analyzing portfolio behaviour.
 - (b) The measure of risk by variance would place equal weight on the upside deviations and downside deviations.
 - (c) Arbitrage exists as a result of market inefficiencies.

8. Write short notes on any *two* of the following :

$2 \times 10 = 20$

- (a) Deterministic
 - (b) Options
 - (c) Hedging
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