

## Finance (Elective VIII)

### Course Title: Financial Derivatives

Course Code	: 17BA4T6FA	External Marks	: 60
Core / Elective	: Core	Internal Marks	: 40
Credits	: 3	Contact Periods	: 3
Year/Semester	: II year/II semester	Tutorial Periods	: 2

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#### Course Objectives

This course seeks:

1. To create awareness in detail regarding financial instruments such as options, futures, swaps and other derivative securities.
2. To familiarize the students with the characteristics of financial derivatives and their relationships with the underlying assets.
3. To enable the students to understand issues pertaining to pricing and hedging with options on individual stocks and indexes, to examine forwards and futures contracts for equity indexes, commodities, and currencies.
4. To introduce the second generation derivative products such as interest rates and the management of credit risks.
5. To provide a detailed understanding of the valuation principles and models for derivatives and use them for a wide range of hedging, trading and arbitrage purposes.

#### Course Outcomes

At the end of this course, students will be able to:

1. Outline various types of derivatives including options, futures, and swaps etc.
2. Interpret the trading mechanism of derivatives.
3. Differentiate between various trading strategies using options and futures
4. Analyze the value of options using option pricing models.
5. Demonstrate the use of swaps in risk management.

**Unit 1- Introduction:** Forwards and futures contracts- Other derivatives -Trading - regulation -Index futures - Futures on currencies - Interest rate futures - Derivatives market in India.

**Unit 2- Options Market:** Properties of stock options - Mechanics of option markets - Underlying assets - Stock options – Warrants- Executive stock options- Convertibles.

**Unit 3- Trading Strategies:** Strategies involving options – Spread- Combinations- Other payoffs -Options on indices - Hedging Strategies using Derivatives.

**Unit 4- Options Valuation:** Binomial model - One-step and two step binomial trees - Black-Schools model – Log normal property of stock prices - Volatility - Causes of volatility.

**Unit 5- Swaps:** Currency swaps - Interest rate swaps - Equity swaps - Credit derivatives – Credit default swaps - Caps and floors.

**Case Study:** Compulsory. Relevant cases have to be discussed in each unit.

**Reference Books**

1. Bhalla, V.K, “Financial Derivatives”, Sultan Chand, New Delhi.
2. BishnuPriya Mishra, “Financial Derivatives”, Excel Books, New Delhi.
3. Brennet, M, “Option Pricing: Theory and Applications”, Lexington Books, Toronto.
4. Dhanesh Kumar K, “Derivatives and Risk Managements”, Mc Millan Publishers India Ltd., New Delhi, 2012.
5. Franklin Edwards and Cindy Ma, “Futures and Options”, Tata McGraw Hill, New Delhi.
6. Gupta S L., “Financial Derivatives: Theory, Concepts and Problems”, Prentice Hall of India, New Delhi.
7. John C. Hull, “Options, Futures and Other Derivatives”, Prentice Hall of India, New Delhi.
8. Kumar S SS, “Financial Derivatives”, Prentice Hall of India, New Delhi.
9. Preeti Singh, “Financial Institutions”, Ane Books India, New Delhi.
10. Redhead: Financial Derivatives, “An Introduction to Futures, Forwards and Options”, Prentice Hall of India, New Delhi.
11. Satyanarayana Chary T, “Financial Derivatives”, Excel Books, New Delhi.