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Total No. of Pages : 02

Total No. of Questions : 15

MBA (2014 to 2017) (Sem.-4)

FINANCIAL ENGINEERING

Subject Code : MBA-930

Paper ID : [A2535]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** contains **SIX** questions carrying **FIVE** marks each and students has to attempt any **FOUR** questions.
2. **SECTIONS-B** consists of **FOUR** Subsections : Units-I, II, III & IV. Each Subsection contains **TWO** questions each carrying **EIGHT** marks each and student has to attempt any **ONE** question from each Subsection.
3. **SECTION-C** is **COMPULSORY** carrying **EIGHT** marks.

SECTION-A

1. What do you mean by option premium?
2. What do you mean by forward rate agreement?
3. Define interest rate risk.
4. What do you mean by financial engineering?
5. How futures differ from forward?
6. Define role of financial engineer.

SECTION-B**UNIT-I**

7. Discuss in detail stages of New Product Development used by the Financial Engineers to customize the New Product.
8. Describe in detail factor contributing to the development of financial engineering branch. What are the motivational factors for investor and issuer to take the assistance of financial engineer? How financial engineer differ from financial analyst?

UNIT-II

9. How is the rate of return on an assets is defined? What is the relationship of risk and return as per CAPM? Explain the principle of dominance. Define the efficient portfolio.

10. What do you mean by derivative market? Discuss in detail factor contribute to the need and origin of derivative market. Who can be the participant to the derivative market and how they affect activities of financial market?

UNIT-III

11. What do you mean by single period options? Discuss in detail factors and Greek risk techniques, which affect option prices. What are various strategies, which can be designed by the financial engineer to manage the risk?
12. Discuss in detail basics of options. Why option is considered as price insurance contract? How mechanism of using European call/put options can be understood with the help of example? Discuss in detail stepwise assumptions taken by Black-Scholes model to determine price for call option.

UNIT-IV

13. Discuss in detail basics and origin of credit derivatives. Why credit derivatives are used by various players in the current scenario? How mechanism of using credit derivatives can be understood with the help of examples? Discuss in detail types of risk can affect credit derivatives.
14. Explain with the help of example that how Forward Rate agreement can be used by any Institution, When it s exposed to a single period interest rate risk. How future different forward contract?

SECTION-C

15. a) Discuss in detail on the basis of following information how interest rate swaps are used to reduce Cost of Financing. How this is beneficial to each party involved in the process. Suppose that party A is in need of 10 years debt financing desire fixed rate obligation. A can borrow at a floating rate of six month LIBOR plus 50bps or at a semiannual fixed rate of 11.25% . Party B also in need of 10yr debt financing desire floating rate obligation. Party B can borrow fixed rate of semiannual rate of 10.25 % and can borrow floating rate as six months. The SWAP dealer stands ready to enter a SWAP. In both the cases the dealer's floating rate is six month LIBOR. If dealer is to be the fixed rate payer it will pay a SWAP Coupon of 10.40% and it requires a swap coupon of 10.50% semiannually.
- b) Discuss in detail risk in following tax driven deal and how it can be hedged.
- X corporation is faced with serious current need for funds. For various reasons, x plans to issue a bond which will be publically traded. If certain events occur, as x expects, x might swaps the bonds in the future with new bond which reduce the interest it must pay. The investor market has been amenable to such swaps under the proper circumstances and x believes that bond swap will work.