

# IMT- 87

# **RISK MANAGEMENT**

#### Notes:

- a. Write answers in your own words as far as possible and refrain from copying from the text books/handouts.
- b. Answers of I<sup>st</sup> Set (Part-A), II<sup>nd</sup> Set (Part-B), III<sup>rd</sup> Set (Part C) and Set-IV<sup>th</sup> (Case Study) must be sent together.
- c. Submit the assignments in IMT CDL H.O. along with the assignments Question Papers for evaluation .
- d. Only hand written assignments shall be accepted.

<u>A. First Set of Assignments</u> <u>B. Second Set of Assignments</u>	5 Questions, each question carries 1.5 marks. 5 Questions, each question carries 1.5 marks.
C. Third Set of Assignments	5 Questions, each question carries 1.5 marks. Confine your answers to 150 to 200 Words.
D. Forth Set of Assignments	Two Case Studies : 7.5 Marks. Each case study carries 3.75 marks.

## **SECTION - A**

Q.1 (a) Explain the principles of risk management. Also explain the limitations of risk management.

(a) Explain the difference between credit risk and the market risk in a financial contract.

(b) Explain why a bank is subject to oredit risk when it enters into two offsetting swap contracts.

(c) Describe briefly some strategies for controlling interest rate risk.

(e) What do you understand by Interest rate risk? What are its sources and also explain the broad categories of interest rate risk.

### **SECTION - B**

**Q.2 (a)** How the options and futures can be used as hedging vehicle? How basis risk replaces the price risk by hedging? Explain.

(b) How is a call option different from Put option? What do you mean by exercising an option?

(c) Critically examine, "buying a call option is risky because the holder commits to purchase a share at a later date."

(d) What do you mean by options strategies? Explain how different strategies can be used as a risk management tool. Give suitable examples.

(e) What do you mean by Strangle? Is it possible to make profits irrespective of increase or decrease in prices of an underlying asset?

#### **SECTION - C**

Q.3 (a) What are different type of currency Derivatives? What are its uses under foreign exchange risk management?

(b) What do you mean by Foreign Exchange risk and what are the tools to manage foreign exchange risk?

(c) What do you mean by Hedge Ratio?

- (d) Explain how a total return swap can be used as a financing tool?
- (e) Explain : Liquidity risk

#### CASE STUDY-1

An investor can use different Option strategies for Risk management. Given below are some of the strategies being contemplated by a person. You are required to calculate

(i) Risk neutral position

- (ii) Maximum pay off and
- (iii) Maximum Loss under each strategy:

(a) Mr. XYZ is bullish about ABC Ltd stock. He buys ABC Ltd. at current market price of Rs. 4800 on  $4^{h}$  July. To protect against fall in the price of ABC Ltd., he buys an ABC Ltd. put option with a strike price Rs. 4500 (OTM) at a premium of Rs. 100 expiring on 31<sup>st</sup> July.

(b) Mr. XYZ is bearish on Nifty; When the Nifty is at 4894. He buys a put option with a strike price of Rs. 4700 at a premium of Rs. 50, expiring on 31<sup>st</sup> August.

(c) Mr. XYZ is bullish on Nifty when it is at 4180. He sells a put option with a strike price of Rs. 4400 at a premium of Rs. 120 expiring on 31<sup>st</sup> July.

(d) Nifty is at 4850 on 27<sup>th</sup> April. An investor, Mr. A enters a long straddle by buying a May Rs. 4900 Nifty put for Rs. 85 and a May Rs. 4900 Nifty call for Rs. 122.

(e) Suppose Nifty is at 4500 in May. An investor, Mr. A, executes a short strangle by selling a Rs. 4300 Nifty put for a premium of Rs. 23 and a Rs. 4700 Nifty call for Rs. 43.

### CASE STUDY - 2

X Ltd Canada and Y Ltd of U.S. have approached a swap dealer to arrange a currency swap for them. Interest rate in U.S. and Canada for fixed rate borrowing and floating rate borrowing are:

	US \$	Canada \$
X Ltd.	LIBOR +1%	6%
Y Ltd.	LIBOR +1.5%	7.5%

X Ltd wants to borrow US \$ at floating Rate while Y Ltd wants to borrow Canada \$ at fixed rate. A Swap dealer has agreed to arrange a swap for them for a consideration of **.5%** spread. Design a swap in which both the companies i.e X Ltd and Y Ltd. are equally benefited. Also show the related cash flow position of the transaction.