

PGDM(IBM), 2013-15
Enterprise Risk Management
INS-403

Trimester – IV, End-Term Examination: September 2014

Time allowed: 2 hrs 30 min

Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as Unfair Means. In case of rough work please use answer sheet.

Sections	No. of Questions to attempt	Marks	Marks
A	3 out of 5 (Short Questions)	5 Marks each	$3 \times 5 = 15$
B	2 out of 3 (Long Questions)	10 Marks each	$2 \times 10 = 20$
C	Compulsory Case Study	15 Marks	15
		Total Marks	50

Section- A

Q1.

Consider a position consisting of Rs. 1 million investments in asset A and a Rs. 1 million investments in asset B. Assume that the daily volatilities of both these assets are 1% and that the coefficient of correlation between their returns is 0.4. What is the 5 day 99% VaR for the portfolio?

Q2.

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

Q3.

Suppose that the standard deviation of quarterly changes in the prices of a commodity is Rs. 8, the standard deviation of quarterly changes in a futures price on the same commodity is Rs. 10, and the coefficient of correlation between the two changes is 0.8. What is the optimal hedge ratio for a 3-month contract? What does it mean?

Turn Over

Q4.

What is Swap? How a swap can be used to transform a liability? Explain with example.

Q5

What are different types of financial risk? Define and exemplify?

Section-B

Q6.

Examine the Capital Asset Pricing Model (CAPM) and show the diversifiable portion of a security does not contribute to the risk of overall portfolio.

Q7.

Suppose Company X pays 5% annually (in euros) to Company Y and receives 4% annually (in dollars). Company X pays a principal amount of \$ 150 million to Y, and Y pays a euro 100 million to X at the inception of the swap. Assume the yield curve is flat in the United States and in Germany (Euro). The U.S. rate is 3%, and the German rate is 5%. The current spot exchange rate is \$ 1.45/ Euro. What is the value of currency swap to Company X if it is expected to last for two more years?

Q8.

Suppose you observe a 1- year (Zero Coupon) Treasury security trading at a yield to maturity of 5%. You also observe a 2-year T-Note with a 6% coupon trading at a yield to maturity of 5.5%. And, finally, you observe a 3-year T-note with a 7% coupon trading at a yield to maturity of 6.0%. Assume annual coupon payments. Use the bootstrapping method to determine the 2-year and 3-year spot rates.

Turn Over

Section- C

Q9.

- (i) An airline executive has argued: "There is no point in our using oil futures. There is just as much chance that the price of oil in the future will be less than the futures price as there is that it will be greater than this price." Discuss the executive's viewpoint. (7.5 Marks)
- (ii) Compute the corresponding spot rate curve using the information given below

Input information to bootstrap Spot Rates

Present value of Bond	Coupon	Semiannual Period	Maturity
102.2969	6.125	1	0.5
104.0469	6.250	2	1
104.000	5.250	3	1.5
103.5469	4.750	4	2.0

(7.5 Marks)

