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12MBAFM427

Fourth Semester MBA Degree Examination, June/July 2017
Risk Management

Time: 3 hrs.

Max. Marks:100

- Note: 1. Answer any THREE questions from Q.No. 1 to Q.No. 6.**
2. Question No. 7 and 8 are compulsory.
3. Use of Logarithm, e^x , normal distribution tables allowed.

- 1 a. Define Risk Management. (03 Marks)
b. Differentiate between Pure risk and Speculative risk. (07 Marks)
c. Distinguish between Forward and Future contract. (10 Marks)
- 2 a. What is Credit Risk? (03 Marks)
b. Explain the methods of Managing Pure Risk. (07 Marks)
c. Describe briefly the Economic functions of Commodity Derivative Markets. (10 Marks)
- 3 a. What is a Comparative advantage argument in a Swap? (03 Marks)
b. An index consists of 4 stocks P, Q, R and S. The current value of index is 3070 points. The following information is available : (07 Marks)

Company	Market Price (Rs)	Market Capitalisation (Rs Crore)
P	250	20
Q	790	40
R	1400	65
S	1770	75

Company Q is likely to pay dividend in 40 days time at Rs 12 per share. A 90 days index futures contract is available with a contract multiplier of 200. Considering the risk free rate to be 10% per annum compounded continuously determine the future price of Index futures.

- c. What is a FRA? State the characteristic of a FRA. (10 Marks)
- 4 a. What is Value – at – Risk? (03 Marks)
b. Differentiate between Stress testing and Back testing. (07 Marks)
c. Mr. Aditya is bearish about the index. Spot Index stands at 22,500. He decides to sell one 3 – month Index call option contract with a strike price of 28.60 (Premium) for a strike value of 22,750. Three months later the index closes at 22,250. Calculate his profit/loss on this position. Had he purchased a 3 month put option contract with same strike price, what would have been his pay – off at maturity when the index closed at 22500? (Each Index = 200 points). (10 Marks)
- 5 a. Discuss the factors affecting the prices of options. (05 Marks)
b. Briefly explain the concept of marking to market in relation to futures trading. (05 Marks)
c. The contract size of BOI options is 950. BOI shares are selling at Rs 338 on April 1st. Call options and Put options are available with expiry on May 28th with an exercise price or Rs 350. It is estimated that the standard deviation of the stock is 30%. The risk free rate is 9% using the Black and Scholes model calculate the price of Call and Put option. (10 Marks)

- 6 a. What is Bull spread? (03 Marks)
 b. Differentiate between Straddles and Strangles. (07 Marks)
 c. Explain the working of a Credit default Swap. (10 Marks)
- 7 a. Explain how companies planning new bond issues can hedge their interest rate risk through futures market. (05 Marks)
 b. Identify any 5 Pure risk exposures that affect business. (05 Marks)
 c. What are the motives of hedgers, speculators and arbitrageurs in a derivatives market? (05 Marks)
 d. What is a Plain – Vanilla Swap. (05 Marks)
- 8 On March 1, 2017 an investor has a portfolio of 5 shares as given here.

Security	Price	No. of shares	Beta
A	59.50	5,000	1.05
B	81.85	8,000	0.35
C	101.10	10,000	0.80
D	125.15	15,000	0.85
E	140.50	1,500	0.75

The cost of capital to the investor is 10% per annum. You are required to

- a. Calculate the Beta of Portfolio. (05 Marks)
 b. If current value of NIFTY is 9000 and NIFTY futures have a lot size of 25 units. Calculate the theoretical value of NIFTY futures for April. (05 Marks)
 c. Calculate the number of contracts of NIFTY, the investor needs to sell in order to get a full hedge until April. Assume Futures are trading at their fair value. (05 Marks)
 d. Is it possible to reduce Beta of the Portfolio? How? (05 Marks)
