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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution under VTU, Belgaum)

Fourth Semester - Master of Business Administration (MBA)

Semester End Examination; June - 2016

Risk Management

Time: 3 hrs *Max. Marks: 100*

***Note**: Answer any **FOUR** full questions from **PART-A** and **PART-B** (Case Study) is compulsory.*

PART - A

1 a. Define Derivatives. What are the types of Derivative Instruments? 10

b. ABC Ltd port folio of ₹12,00,000 with a beta of 1.2 and the value of one Nifty futures contract is ₹2,50,000. Find the optimal Hedge ratio, assuming details. 10

OR

2 a. Define Hedging. What are the types of Hedging? 10

b. A 2- month call option on the Infosys with strike price of ₹2,100 is selling for ₹140 when the share is leading at ₹2,200. Find out the following :

i) What is the intrinsic worth of the call option? 10

ii) Under what circumstances the option holder would exercise his call?

iii) At what price of the asset the call option holder would break even?

3 a. What factors affect option pricing? 10

b. Assume you bought the call option on ONGC's stock with an exercise price of ₹850 at a premium of ₹ 38.50. Prepare a table showing total profit you make in (₹ as well as %), if on the expiration date, ONGC is trading at the following prices: ₹840, ₹850, ₹860, ₹870, ₹880, ₹890. 10

OR

4 a. Write a note on types of Option strategies. 10

b. What factors affect the level of interest rates? 10

5 a. Consider the following yields curve of Zero-cupon instruments,

Term	Yield (%)
6 Months	7.5
12 months	7.9
2 year	8.4
3 year	8.7

Calculate 6 month continuously compounded forward rates for period starting six months hence. 10

b. What are the differences between forwards and future Contracts? 10

OR

6 a. What are the advantages and disadvantages of futures? 10

b. Distinguish between option and futures. 10

7 a. Calculate the price of European call option on a non- dividend playing stock when the stock price is ₹52, the strike price is ₹50, the risk-free interest rate is 12% per annum. The volatility is 30% per annum, and the time to maturity is 3 months? 10

b. The current price of Bharati's share is ₹800. An investor A is ready to buy one share of Bharti for future delivery after six months. A goes long with the contract. After one month another investor B is prepared to buy Bharathi's share at ₹925 for delivery after five months. If the risk-free interest rate is 9% per annum, What is the value of the forward contract that investor A is holding? 10

OR

8 a. Write a note on spreads and combinations along with suitable examples. 10

b. Illustrate pay-off profile of options and futures with examples. 10

PART - B

Case Study (Compulsory)

9. Reliance had a market price of ₹ 990. The Volatility on the share is 0.34, the risk-free interest rate is 6%. What would be the price of the call with a strike price of ₹ 980/- if the expiry date were 22 days ahead? Determine various values of option risk and interest the same. 20

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