



K20P 1142

Reg. No. : .....

Name : .....

**III Semester M.Com. Degree (CBSS – Reg./Suppl./Imp.) Examination,  
October 2020**

**(2017 Admission Onwards)**

**COM3C14 : DERIVATIVES AND RISK MANAGEMENT**

Time : 3 Hours

Max. Marks : 60

**SECTION – A**

Answer **any four** questions in this Section. **Each** question carries **1** mark for Part (a), **3** marks for Part (b) and **5** marks for Part (c).

1. a) Explain the term performance bond.  
b) What do you mean by "straddle" ?  
c) What do you mean by Monte Carlo valuation ?
2. a) What do you mean by Quasi-arbitrage ?  
b) Explain spot price.  
c) What do you mean by Imperfect hedge ? Explain the reason for imperfect hedging.
3. a) What do you mean by options ?  
b) What do you mean by put options and call options ?  
c) Explain the term option writer and what are the risk factors of option writer ?
4. a) Expand and explain FTSE.  
b) What do you mean by commodity feature ?  
c) What are the different types of margin in future contract ?
5. a) What do you mean by European option ? Explain its features.  
b) Explain the parties in option contract.  
c) How do you classify option and future ?

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6. a) What is meant by forwards ?  
 b) Explain the term hedging.  
 c) How do you classify the forwards and future ?

(4×9=36)

## SECTION – B

Answer **any two** questions in this Section. **Each** question carries **12** marks.

7. a) What are the advantages and disadvantages of derivatives ? Explain.

OR

- b) What is the price of a European put option on a non-dividend paying stock when the stock price is Rs. 69, the strike price is Rs. 70, the risk-free interest rate is 5% per annum, the volatility is 35% per annum, and the time to maturity is six months ?

8. a) What are the different option strategies ? Explain in detail.

OR

- b) The price, strike price and time until expiration are given below for 3 European call options on the same non-dividend paying stock.

	Option Price	Strike Price	Expiration
Option A	8.00	50.00	1 year
Option B	7.70	52.00	1.5 years
Option C	7.50	53.00	2.0 years

An arbitrageur sees an arbitrage opportunity and therefore buys or sells exactly one of Option B at time 0. Subsequently, the actual stock prices emerge as described in the table below :

Time	Stock Price
1 year	50.00
1.5 years	52.50
2.0 years	52.50

The continuously compounded risk-free rate of return is 6%. Arbitrage profits are accumulated at the risk-free rate of return. Determine the value of the arbitrage profits at the end of 2 years. (2×12=24)