Seat No: ________

Vidya Vikas Mandal's

Shree Damodar College of Commerce & Economics, Margao-Goa

Post-Graduate Department of Commerce (M.Com)

M.Com Part-I, Semester-II, Semester End Examination, May 2023

COTC-412: Financial Derivatives (OA – 35)

Duration: 2 Hours **Max Marks: 40**

Instructions:

1. *This paper consists of SIX questions carrying **Equal marks**.*
2. *Question No.1 consists of **5 Compulsory** questions of **2 marks each**.*
3. ***Answer any THREE** questions from question 2,3,4,5 and 6.*
4. ***Each question** carries **10 marks**. Figures to the **right** indicate marks.*

Q.1. Answer the following: (5 × 2 = 10)

a) Distinguish between Futures contracts and Options contracts.

b) State any four conditions of cost of carry model in Perfect Markets.

c) Explain Arbitrageur with the help of example.

d) What do you understand by Intrinsic Value of option?

e) Explain Currency Swap.

Q.2. A. Explain with the help of an example how Long Hedge in futures market helps in risk elimination. (5)

B. Mr. Anthony enters into a three month forward contract with Mr. Benedict to sell shares of Rajhauns Ltd. at Rs. 1500 per share and holds the contract till expiry.

a) Calculate the pay-offs for the long position

b) Draw the pay-off diagram

for the following possibilities of spot prices on maturity.

Spot price on maturity	1460	1470	1480	1490	1500	1510	1520	1530	1540

(5)

Q.3. 'The introduction of risk management instruments in India gained momentum in the last few years due to liberalization process. Derivatives are an integral part of liberalization process to manage risk.' Discuss the evolution of derivatives in India. (10)

Q.4. A. Consider the following data.

Particulars	Rs.
Spot price of Silver per 1 unit	4500
Futures price of silver per 1 unit (for delivery in 1 year)	5000
Interest Rate per annum	8%

1. Work out the possibility of Cash and Carry Arbitrage and calculate the profit in the perfect markets.
2. If the interest rate was 12%, calculate the profit in the perfect markets using Reverse Cash and Carry Arbitrage Mechanism. **(5)**

B. A firm is expecting to borrow a sum of Rs.10,00,000 for a period of 6 months.

A Bank has given the following quotations:

Spot: 5.50% - 5.75%

3 × 9 FRA: 5.64% - 5.94%

You are required to determine how a Forward Rate Agreement will help in risk elimination if the actual interest rate after 3 months turnout to be: (i) 4.5% (ii) 6.5% **(5)**

Q.5. A. Explain any five Determinants of Option Prices. **(5)**

B. How Do Interest Rate Swap Contracts Work? Explain with the help of an example. **(5)**

Q.6. Virja's stock is trading today at Rs.100.

Following options are available for trading:

Call option at strike price of Rs.150 and premium of Rs. 5

Put option at strike price of Rs.150 and premium of Rs. 5

Call option at strike price of Rs.160 and premium of Rs. 5

Futures Contract at price of Rs.150

Maturity = 3 months

Calculate the pay-offs and draw diagram showing profit/ loss if the investor goes for:

1. Long straddle
2. Covered call writing

Use the following possibilities of price of Virja's stock after 3 months.

90	100	110	120	130	140	150	160	170	180	190	200	210

(10)

*********************Best Wishes**********************