

12 MAR 2025 (M)

NCU-FORM-29

	Minor Examination Question Paper	Review Date:
	Department of Management and Commerce	Semester: VI
	Programme: B.COM	Session: Jan – June 2025
	Course Name: Equity Derivatives Certification	Maximum Marks: 25
	Course Code: CML308	Duration: 90 minutes
		Sheet 1 of 2

Instructions

- The paper has THREE Sections.
 - Section A has THREE questions of TWO marks each.
 - Section B has THREE questions of FIVE marks each.
 - Section C is Application Based and is of FOUR marks.
- There is **NO CHOICE** in this paper.
- Attempt one section fully before starting with a new section.
- This paper does NOT require use of any log/statistic table(s)
- This paper requires use of any calculator.

Course Outcomes

CO1 Understand the basics of the Indian equity derivatives market.

CO2 Comprehend the various trading strategies that can be built using futures and options on both stocks and stock indices.

SECTION A

Short Answer Type Questions
6 marks

Q#	QUESTION	Marks	CO#																
1.	ABC Financial Services Ltd. is planning to enter the derivatives market and develop a new product for their institutional clients. To ensure success, they need to understand the role of different key players in the derivatives market and their functions. In the context of the derivatives market, identify the key players involved and explain their respective roles.	2	CO2																
2.	A stock index is calculated using the free float market capitalization method. The index consists of three companies: <table border="1"> <thead> <tr> <th>Company</th><th>Total Shares (millions)</th><th>Free Float (%)</th><th>Market Price per Share (₹)</th></tr> </thead> <tbody> <tr> <td>A</td><td>100</td><td>80%</td><td>50</td></tr> <tr> <td>B</td><td>150</td><td>60%</td><td>120</td></tr> <tr> <td>C</td><td>200</td><td>75%</td><td>90</td></tr> </tbody> </table> Calculate the total free float market capitalization.	Company	Total Shares (millions)	Free Float (%)	Market Price per Share (₹)	A	100	80%	50	B	150	60%	120	C	200	75%	90	2	CO1
Company	Total Shares (millions)	Free Float (%)	Market Price per Share (₹)																
A	100	80%	50																
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3.	Explain the various types of derivative markets, highlighting their distinctive characteristics and features.	2	CO1																

SECTION B

Long Answer Type Questions
15 marks

Q#	QUESTION	Marks	CO#
4.	A trader wants to buy 5,000 shares of XYZ Ltd., which is listed in the derivatives market. The current best bid and ask prices for XYZ Ltd. are: - Best Bid Price: ₹198 - Best Ask Price: ₹202	5	CO1

	The trader places a market buy order for 5,000 shares and gets the following execution: <table><tr><th>Price (₹)</th><th>Quantity Filled</th></tr><tr><td>202</td><td>2,000</td></tr><tr><td>203</td><td>1,500</td></tr><tr><td>204</td><td>1,000</td></tr><tr><td>205</td><td>500</td></tr></table> (a) Calculate the Impact Cost for this trade. (4 Marks) (b) What does the impact cost indicate in this scenario? (1 Mark)	Price (₹)	Quantity Filled	202	2,000	203	1,500	204	1,000	205	500		
Price (₹)	Quantity Filled												
202	2,000												
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5.	Discuss the various models used for futures pricing, providing appropriate examples to illustrate each model's application.	5	CO2										
6.	An investor purchases a put option on a stock with a strike price of ₹500. The premium paid for the option is ₹20 per share. The option expires in 1 month. The stock price at expiration could either be ₹450, ₹500, or ₹550. Calculate the payoff for the investor at expiration under each scenario.	5	CO1										

SECTION C
Application Based Question / Case Study
4 marks

Q#	QUESTION	Marks	CO#												
7.	A trader expects the price of a stock to fall and decides to short (sell) futures on the stock. Stock price today: ₹500 Futures price today: ₹510 Lot size: 100 shares Margin required: 20% of the contract value Stock price on expiry: ₹480 Calculate: <table><tr><td>i.</td><td>Total Contract Value</td><td>(1 Mark)</td></tr><tr><td>ii.</td><td>Margin Required</td><td>(1 Mark)</td></tr><tr><td>iii.</td><td>Total Profit/Loss on Expiry</td><td>(1 Mark)</td></tr><tr><td>iv.</td><td>Return on Margin</td><td>(1 Mark)</td></tr></table>	i.	Total Contract Value	(1 Mark)	ii.	Margin Required	(1 Mark)	iii.	Total Profit/Loss on Expiry	(1 Mark)	iv.	Return on Margin	(1 Mark)	4	CO2
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