

Name:			
Enrolment No:			
UPES End Semester Examination, December 2025 Course: Introduction to Derivatives Program: B.COM HONS Course Code: FINC3017 Semester: V Time: 03 hrs. Max. Marks: 100			
Instructions:			
SECTION A 10Qx2M=20Marks			
S. No.		Marks	CO
Q 1	Select one right option		
(i)	The Securities Contracts (Regulation) Act, 1956 primarily regulates: a) Company formation b) Securities and derivatives trading c) GST filing d) RBI monetary policy	2	CO1
(ii)	Which of the following is not an underlying asset? a) Wheat b) Equity shares c) Interest rates d) Demat account	2	CO1
(iii)	The oldest known derivative markets originated in: a) USA b) Japan c) India d) China	2	CO1
(iv)	Hedgers participate in derivatives markets to: a) Maximize speculation b) Reduce risk c) Avoid taxation d) Fix brokerage charges	2	CO1
(v)	Arbitrage refers to: a) Taking large speculative positions b) Riskless profit opportunity c) Trading without margin d) Only intra-day trading	2	CO1
(vi)	Which of the following is an economic function of derivatives? a) Increasing savings b) Risk transfer c) Increasing inflation d) Reducing GDP	2	CO1

(vii)	A higher interest rate generally leads to: a) Lower bond prices b) Higher bond prices c) No effect on bonds d) Higher dividend yield	2	CO1
(viii)	A stock index represents: a) Performance of a set of stocks b) Market capitalization only c) Inflation measurement d) Government revenues	2	CO1
(ix)	Stock futures price is determined using: a) Spot-Futures Parity b) Demand–supply only c) Dividend policy only d) Arbitrage costs alone	2	CO1
(x)	A corporate action such as a bonus issue leads to: a) No change in futures contract b) Adjustment in strike price and market lot c) Termination of the contract d) Change in expiry date	2	CO1

SECTION B
4Qx5M= 20 Marks

Q	Statement of question		
Q 2	Write a short note on the Securities Contracts (Regulation) Act, 1956	5	CO2
Q 3	On 28/03/2025, Company ABC Ltd purchases 2000 call options of XYZ Ltd share with a strike price of ₹400 at a premium of ₹8 per share and expiry of 1 month. Initial premium paid = ₹16,000 (₹8 × 2000). - The following is the change in the premium: Day 1: ₹8.5, Day 2: ₹8.2, Day 3: ₹8.9. - At expiry on 27/04/2025, option is exercised. Share price in the market is ₹415. Pass the relevant journal entries 31/03/2025.	5	CO2
Q 4	Describe the economic significance of stock market index movements.	5	CO2
Q 5	Explain the concept of “mark-to-market” in futures trading.	5	CO2

SECTION-C
3Qx10M=30 Marks

Q	Statement of question		
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Q6	Discuss the evolution of financial derivatives markets in India and globally. Explain how they have shaped modern financial systems.	10	CO3																								
Q7	NSE wants to construct a stock market index using five companies with the following market capitalizations and free float factors. <table border="1"> <thead> <tr> <th>Company</th><th>Base Market Price per Share (₹)</th><th>Total Outstanding Shares</th><th>Free Float Factor</th></tr> </thead> <tbody> <tr> <td>A</td><td>500</td><td>50,000</td><td>0.4</td></tr> <tr> <td>B</td><td>550</td><td>1,00,000</td><td>0.9</td></tr> <tr> <td>C</td><td>300</td><td>1,50,000</td><td>1.0</td></tr> <tr> <td>D</td><td>650</td><td>25,000</td><td>0.6</td></tr> <tr> <td>E</td><td>800</td><td>30,000</td><td>0.8</td></tr> </tbody> </table> i. Find the total free-float market capitalization and set (assume) the index base value at 1000 for the following question. ii. If prices change, say Company A's price rises to ₹660, B's drops to ₹420, C's rises to ₹330, D's remains 650 and E's drops to 740, and assuming that outstanding shares and free float factor remain constant, find the new index value and percentage change in the index.	Company	Base Market Price per Share (₹)	Total Outstanding Shares	Free Float Factor	A	500	50,000	0.4	B	550	1,00,000	0.9	C	300	1,50,000	1.0	D	650	25,000	0.6	E	800	30,000	0.8	10	CO3
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Q8	An audit finds that a brokerage firm violated SEBI derivative margin rules while onboarding new clients. Questions: a) Evaluate implications under SEBI Act 1992. b) Propose corrective measures.	10	CO3																								
SECTION-D 2Qx15M= 30 Marks																											
Q	Statement of question		CO4																								
Q9	A trader purchases a Call Option on XYZ Ltd. with: - Strike Price = ₹1,500 - Premium Paid = ₹40 - Lot Size = 100 Spot prices at expiry can be any of the following (three scenarios): (i) ₹1,450	15	CO4																								

	(ii) ₹1,520 (iii) ₹1,620 Questions: a) Prepare payoff tables for all three scenarios. b) Determine the breakeven point. c) Evaluate the trader’s maximum loss and potential unlimited gain. d) Suggest whether buying a call option was justified. OR You enter into a long position in Nifty Futures at ₹22,000, lot size 50. The daily settlement prices for the next five days are: Day Settlement Price (₹) <table><tr><td>1</td><td>22,050</td></tr><tr><td>2</td><td>21,900</td></tr><tr><td>3</td><td>22,200</td></tr><tr><td>4</td><td>22,100</td></tr><tr><td>5</td><td>21,850</td></tr></table> Questions: a) Compute the daily M2M profit/loss for each day. b) Determine the total M2M P/L over 5 days. c) Evaluate whether maintaining the position was strategically beneficial. d) Recommend whether a stop-loss policy should have been applied.	1	22,050	2	21,900	3	22,200	4	22,100	5	21,850		
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Q10	An investor buys a portfolio valued at ₹5,00,000. To protect against downside risk, she buys a Nifty Put Option at: • Strike = 21,000 • Premium = ₹90 • Lot size = 50 • One lot purchased. At expiry, Nifty closes at: (i) 20,700 (ii) 21,050 (iii) 20,200 Questions: a) Compute the payoff in each scenario. b) Evaluate how effective the put option is as insurance. c) Analyse the cost-benefit of buying protective puts. d) Suggest alternative hedging strategies.	15	CO4										

OR

Stock PQR is trading in spot at ₹980.

Futures price = ₹1,050

Risk-free rate = 8% p.a.

Time to expiry = 2 months

No dividends.

Questions:

- a) Determine theoretical futures price using cost-of-carry.
- b) Identify whether arbitrage exists.
- c) Create the step-by-step arbitrage strategy.
- d) Evaluate risks associated with this arbitrage.