Real-Data Mini-Assignment

Apply Reading 2 to real Indian market data. About 45 minutes. Use your BA II Plus or Excel, show every step, and write the formula before the numbers.

Name: _____ **Batch:** _____ **Date:** _____

TASK 1 — Price an Indian 91-day T-bill

Module 2.1 · 10 marks

Where to look: RBI website (rbi.org.in) — weekly Treasury bill auction results, or the RBI Weekly Statistical Supplement. Note the **cut-off price** per ₹100 face value for the latest 91-day T-bill auction.

Auction date	Face value (₹)	Cut-off price (₹)	Days	Holding period return	Annualized (compound)
Example	100	98.50	91	(100 - 98.50) / 98.50	(1 + HPR)^(365/91) - 1

a) Compare your annualized figure with the yield RBI publishes. Why might they differ slightly?

b) If the market rate rose by 0.50% tomorrow, what would the new price be? Show the steps.

TASK 2 — Your rupee return on a US stock

Module 2.1 · 10 marks

Where to look: FBIL / RBI reference rate for USD/INR (start of the year and today), and the share price of any US company or a US index ETF on the same two dates (exchange website or a finance portal). Note any dividend paid.

Item	Start of year	Today	Return
Share price + dividend (USD)			
USD/INR rate (₹ per $)			
Value in ₹			

a) Compute the rupee return two ways: (i) convert to ₹ first, (ii) $(1 + R_{USD})(1 + R_{FX}) - 1$. Do they match?

b) Did the currency help or hurt? What would an investor who simply added the two returns have got wrong?

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TASK 3 Nifty 50 vs one volatile stock

Module 2.1 · 15 marks

Where to look: NSE website (nseindia.com) historical data. Take the last trading-day close of each of the last 4 calendar years for the Nifty 50 and for one stock of your choice. That gives 3 yearly returns.

Year	Stock close	Stock return	₹100 in stock	Nifty close	Nifty return	₹100 in Nifty
Start		—	100		—	100
Year 1						
Year 2						
Year 3						

Measure	Stock	Nifty 50
Arithmetic mean		
Geometric mean		
Volatility drag (arith - geo)		
Range (high - low)		

a) Which has the bigger gap between arithmetic and geometric mean? Link your answer to volatility.

TASK 4 Spot the risk in the news

Module 2.2 · 10 marks

Pick **three** financial news headlines from this week (any business newspaper). For each, name the risk and classify it.

Headline (short)	Risk type (e.g. interest rate, credit, sector)	Systematic or unsystematic?	Can diversification reduce it?

a) Recommend an equity / bond / cash mix for (i) a 26-year-old analyst and (ii) your retired grandparent. Justify in one line each.

Marking guide (45 marks): correct formula written first · clear steps · correct answer · a one-line interpretation in your own words. The interpretation carries the most weight: the goal is to understand what the numbers mean, not just compute them.

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