PART – I

Case Scenario-I

Mr. X, an investor buys the stocks of WBL Limited worth ₹ 21,60,000 due to very strong fundamentals. Since last 3 months, the market sentiment is weak and witnessed a significant volatility and considered to remain weak for about the next three months. Keeping in the mind volatility in the market, Mr. X is planning to hedge his portfolio in the future market. The Beta of WBL stock is 1.3 and the current value of NIFTY is 2250 and 3 months future is selling at 2310. The current market price of the WBL stock is ₹ 240. Each Nifty future can be trade in units of 240 only.

Assume there is no transaction cost and M to M Margin.

From the information given above, choose the correct answer to the question No. 1 to 3 : **(3 × 2 = 6)**

1. If NIFTY index rises by 6% from 2250 to 2385 and WBL stock rises to ₹ 255, what will be Net Gain/Loss when portfolio was in hedged ?

   (A) Net Loss ₹ 90,000

   (B) Net Gain ₹ 45,000

   (C) Net Gain ₹ 1,35,000

   (D) Net Gain ₹ 90,000

2. Number of future contract to be buy/sell to hedge WBL stock against expected fall in the market (rounded of contracts) –

(A) Buy 6 future contracts

(B) Sell 5 future contracts

(C) Buy 5 future contracts

(D) Sell 6 future contracts

3. If Nifty index fall by 10% from 2250 to 2025 and WBL stock falls to ₹ 212, what will be Net Gain/Loss if portfolio was hedged on NIFTY future ?

(A) Net Gain ₹ 3,42,000

(B) Net Gain ₹ 3,02,100

(C) Net Gain ₹ 50,100

(D) Net Gain ₹ 90,000

Case Scenario-II

ABC Ltd., a UK firm, has a receivable $ 20 Million due in 6 months. The company wants to cover full exposure. Following information are available :

Spot rate 1$ = £ 0.7720 / £ 0.7840

6 months forward rate 1$ = £ 0.7910 / £ 0.8040

Interest rates are as follows:

	US	UK
6 months deposit rate	4.50% p.a.	5.50% p.a.
6 months borrowing rate	6.00% p.a.	7.50% p.a.

Following options on pound are available :

Option	Strike rate	Price
Call	£ 0.8100	£ 0.01
Put	£ 0.8100	£ 0.02

ABC Limited has forecasted the spot rates for 6 months as follows :

Future Rates of 1$	Probability
£ 0.7800	30%
£ 0.8100	50%
£ 0.8300	20%

From the information given above, choose the correct answer to the question No. 4 to 7 : **(4 × 2 = 8)**

4. What will be expected spot rate at the end of 6 months and expected cost (proceed) if no hedge strategy is adopted by the company ?

(A) £ 0.805/$, £ 16.10 million

(B) £ 0.85/$, £ 15.8 million

(C) £ 0.7720/$, £ 15.44 million

(D) £ 0.7910/$, £ 15.82 million

5. Identify which option gives the highest proceed.

(A) Option hedge

(B) Forward hedge

(C) Money market hedge

(D) No hedge

6. What will be the total expected value of option hedge in pounds, if the full exposure of 20 Million is covered ?

(A) £ 16.125 million

(B) £ 16.50 million

(C) £ 15.88 million

(D) £ 15.70 million

7. If ABC Ltd. is using forward hedge strategy, what will be total proceed in pound ?

(A) £ 15.40 million

(B) £ 15.88 million

(C) £ 16.125 million

(D) £ 15.82 million

Case Scenario-III

Equity Researchers have estimated the rate of returns for Stock A, Stock B and Market Portfolio under each state of the economy is as under-

Economy	Probability	Return on Stock A (%)	Return on Stock B (%)	Market Portfolio (%)
Boom	0.3	16	19	18
Normal	0.4	14	16	15
Recession	0.3	–9	–7	–8

The risk-free rate of return is expected to be 8%. The covariance between Stock A and the Market Portfolio is 122.70, while the covariance between Stock B and the Market Portfolio is 125.40. Assume that the CAPM framework is valid in this market.

From the information given above, choose the correct answer to the question No. **8** to **12** : **(5 × 2 = 10)**

8. What will be the beta of Stock A and Stock B respectively ?

(A) 0.9542 and 1.00

(B) 0.9862 and 1.24

(C) 0.9785 and 1.00

(D) 0.9785 and 1.24

9. Required rate of return of Stock A is _____ and Stock B is _____.

(A) 8.9785 % and 9%

(B) 9% and 8.978%

(C) 8.9875% and 9%

(D) 8.9785% and 10.4%

10. Based on calculated Alpha of Stock A and Stock B in the above case scenario, which of the following statements is correct for purchase or sale of Stock A and Stock B ?

(A) Stock A has a positive alpha, and Stock B has a negative alpha. This indicates that Stock A is underpriced and Stock B is overpriced. Therefore, purchase Stock A and sell Stock B.

(B) Both Stock A and Stock B have positive alpha values, suggesting they are underpriced. Therefore, purchase both stocks.

(C) Stock A has a negative alpha, while Stock B has a positive alpha. This means Stock A is overpriced and Stock B is underpriced. Therefore, sell Stock A and purchase Stock B.

(D) Both Stock A and Stock B have negative alpha values, indicating they are overpriced. Therefore, sell both stocks.

11. What is the expected rate of return (percentage) for Stocks A and B ?

(A) 7.70% and 9.00%

(B) 10% and 9.00%

(C) 7.70% and 10%

(D) 13.1% and 14.20%

12. What will be the variance of market portfolio ?

(A) 38.4

(B) – 4.8

(C) 126.8

(D) 125.4

Case Scenario-IV

Steady Mutual Fund has the following assets in Scheme – Star Gold at the close of business as on 31st March, 2025:

Company	No. of Shares (units)	Market Price per share (₹)
A Ltd.	20,000	25
B Ltd.	30,000	350
C Ltd.	38,000	290
D Ltd.	50,000	400

The total numbers of units of Scheme – Star Gold are 20 lakhs. The Scheme – Star Gold has accrued expenses of ₹ 2,00,000 and other liabilities of ₹ 2,50,000.

From the information given above, choose the correct answer to the question No. **13** to **15** : **(3 × 2 = 6)**

13. NAV per unit of the Scheme – Star Gold is –

(A) ₹ 21.135

(B) ₹ 21.035

(C) ₹ 20.785

(D) ₹ 21.235

14. Total gross value of the Scheme – Star Gold is –

(A) ₹ 325.00 lakhs

(B) ₹ 420.20 lakhs

(C) ₹ 480.40 lakhs

(D) ₹ 520.30 lakhs

15. Total net value of the Scheme – Star Gold is –

(A) ₹ 422.70 lakhs

(B) ₹ 420.70 lakhs

(C) ₹ 415.70 lakhs

(D) ₹ 424.70 lakhs

PART – II

1. (a) Following details are available for PQR Ltd. : 6

Current Dividend = ₹ 3.50

Cost of Equity = 12.50%

Growth Rate = 2%

You required to –

(i) Calculate Price of Share of PQR Ltd.

(ii) Is PQR Ltd.'s Share over-valued if the Share Price = ₹ 45, ROE = 8% and EPS = ₹ 2.75 ?

Show your calculations using both the P/E Multiple Approach and Earnings Growth Model.

(b) With the help of the following information of PND Ltd., compute the Economic Value Added : 4

Equity Share Capital ₹ 100 Lakhs

Reserves and Surplus ₹ 200 Lakhs

8% Debentures ₹ 300 Lakhs

Cost of Equity = 15%

Financial Leverage = 1.5 times

Income Tax Rate = 25%

(c) Mr. PK imports raw materials from China, processes them in India and manufactures finished goods which are then sold in the American market. In this transaction what types of risk faced by Mr. PK ? 4

2. (a)

Security	Standard Deviation (σ)	Weights (w)
R	20%	0.8
S	50%	0.2

6

Calculation upto two decimal place.

From the information given above, you are required to calculate Portfolio Standard Deviations, if-

(i) Securities returns are independent.

(ii) Securities returns are perfectly negatively correlated.

(iii) Securities returns are perfectly positively correlated.

(b) Mr. X gets the following 2-way quotes in the foreign exchange market : 4

	Spot	2-months Forward
₹/US$	₹ 86.00/₹86.20	₹ 88.00/88.40

Calculation upto two decimal place.

You are required to calculate –

(i) How many US Dollars should Mr. X sell to get ₹ 40,00,000 after 2 months ?

(ii) How many Rupees Mr. X is required to pay to obtain US$ 3,00,000 in the spot market ?

(iii) Assume that Mr. X has US$ 75,000 in current account earning no interest. Return on Investment (ROI) on rupee investment is 12% per annum. Should Mr. X convert the US$ now or 2 months later ?

(c) Identify the role of CFOs in addition to traditional role in post pandemic time. 4

3. (a) BC Ltd. is contemplating on buying a new machine at ₹ 70,00,000 with an additional working capital requirement of ₹ 10,00,000. The machine is expected to have an economic useful life of 5 years, with no salvage value. The company follows the straight line method of depreciation and same is accepted for tax purposes. The machine is expected to generate an incremental increase in the before tax cash operating income of ₹ 25,00,000 (in real terms) per year for a period of 5 years. The relevant tax rate is 35%. Inflation is expected to be 6% per year and the firms cost of capital in real term is 10% per year. Assuming that the working capital requirement will remain unchanged throughout the period, in spite of inflation. 6

Advise the company whether the machine should be purchased or not. Show your NPV calculation in real term.

Calculation upto two decimal place.

PV Factor at 10% & 6% are as under -

PV factor	1	2	3	4	5
At 10%	0.909	0.826	0.751	0.683	0.621
At 6%	0.943	0.890	0.840	0.792	0.747

(b) Mr. X has excess cash of ₹ 50 lakhs which he wants to invest in short-term marketable securities. 4

Expenditure relating to this investment will be ₹ 1,25,000 and the securities invested will have an annual yield of 9%.

Mr. X seeks your advice –

(i) as to the period of investment so as to earn a pre-tax income of 5%.

(ii) as to the minimum period to break-even his investment expenditure.

(c) Mr. J believes that the market has demonstrated a weak type of efficiency. Explain the various types of tests that can be used to prove the weak form of efficient market theory. 4

4. (a) Peacock Inc., a US based company, is planning to set up a software development unit in India. The unit will remain in existence in India for one year and the software is expected to get developed within this time frame. Software developed will be bought back by the US parent at a transfer price of USD 4 Million. The software developed will be sold in the US for USD 6 Million. Other estimates are as under : 6

(i) Rent for fully furnished unit with necessary hardware in India is ₹ 25,00,000.

(ii) Manpower Cost - 120 software professionals will be working for 10 hours @ ₹ 275 per man-hour each day for 350 effective days in the year.

(iii) Administrative and Other Costs is ₹ 50,00,000

(iv) The rupee-dollar rate is ₹ 84 per USD.

Peacock Inc. will enjoy the following privileges in India:

(A) All profits can be repatriated.

(B) No withholding taxes.

(C) Corporate taxes @ 20 percent on earnings.

Assume 365 days in year.

Advise Peacock Inc. on the financial viability of the project.

(b) GL Ltd. is having a Price Earnings Ratio (P/E Ratio) of 16 times and Earnings per Share (EPS) of ₹ 5. The total numbers of outstanding shares are 2,80,000. 4

FL Ltd. another company is also in the same industry. The GL Ltd. is in negotiation for acquisition of the FL Ltd. by issuing shares in the ratio of 4:5, i.e., for 5 shares of FL Ltd., 4 shares of GL Ltd. will be issued. The outstanding shares of FL Ltd. are 50,000. The EPS of the merged entity will be ₹ 5.4.

You are required to calculate-

(i) Pre-merger EPS of FL Ltd.

(ii) Number of shares of GL Ltd. to be issued to FL Ltd. if pre-merger EPS of GL Ltd. is to be maintained.

(c) "Tokenization is some extent resembles the process of securitization." In the reference of this statement, discuss similarities of tokenization and securitization. 4

OR

A venture capital fund manager provides funding at various stages of business growth, taking into consideration factors such as the investment horizon, risk perception, and the specific activities to be financed. You are required to complete the risk matrix provided below :

Financial stage	Locking Period	Risk Perception	Activity to be Financed
Seed money			
Start up			
Second stage			
Fourth stage			

5. (a) On 1st April, an open-ended scheme of Progressive Mutual Fund had 800 Lakh units outstanding with Net Asset Value (NAV) of ₹ 44.30 per unit. At the end of April, it issued 16 Lakh units at opening NAV plus 2% load, adjusted for dividend equalization. At the end of May, 8 Lakh units were repurchased at opening NAV less 2% exit load adjusted for dividend equalization. At the end of June, 60% of its available income was distributed as dividend. 7

In respect of April-June quarter, the following additional information is available :

Particulars	₹ in Lakh
Portfolio Value Appreciation	965.280
Income of April	49.440
Income for May	75.070
Income for June	93.710

Calculation upto 4 decimal place.

You are required to calculate-

(i) Income available after distribution of dividend.

(ii) Issue price at the end of April.

(iii) Repurchased price at the end of May.

(iv) Net Asset Value (NAV) per unit as on 30th June.

(b) ZIO is a small-to-medium-sized privately held company specializing in electrical equipment manufacturing and is seeking additional investors. Below are key financial indicators to assist in evaluating the investment potential : 7

- Break-even Achieved: The Company has reached its break-even point this year.
- EBITDA: ₹ 110 Lakh, including an extraordinary gain of ₹ 16 Lakh.
- Pending Adjustments: ₹ 38 Lakh in preliminary sales promotion costs are yet to be written off.

- Unlevered Beta: 1.5 (based on the industry benchmark).
- Capital Structure: Debt-to-Equity Ratio of 30:70
- Risk-Free Rate: 6% (based on liquid bonds).
- Market Rate of Return: 12% (internal industry assessment).
- Equity Value (EV): The EV is to be taken at a multiple of 8 on EBITDA.
- The pre-tax cost of debt is 12.45% and assume a tax regime of 30%

The Future Cash Flows (FCFs) for the next three years are as follows

	Year 1	Year 2	Year 3
Future cash flows (₹ in Lakh)	150	200	220

Future cash flows are discounted at Weighted Average Cost of Capital (WACC)

PV Factor at 15% & 14% are as under-

	1	2	3
PV Factor at 15%	0.870	0.756	0.658
PV Factor at 14%	0.877	0.769	0.675

Calculation upto 2 decimal places.

You are required to calculate potential value to be placed on ZIO Company.

(a) On 31st December, 2024, Mr. RS has taken a long position of 2 lots of Nifty Futures at price 25,400. One lot of Nifty Future is 50 units. 7

Margins :

(i) Initial margin required is 10% of contract value.

(ii) Maintenance margin required is 80% of initial margin.

The closing prices of Nifty Future for 5 days are given below :

Date	Closing price of Nifty Future
01 January, 2025	25,520
02 January, 2025	25,390
03 January, 2025	25,250
04 January, 2025	24,800
05 January, 2025	25,100

Evaluate the following :

(i) Daily balances in margin account and payment on margin calls, if any.

(ii) If contract squared off on 5th January 2025, gain or loss to Mr. RS

(iii) If Mr. RS taken the short position, gain or loss to Mr. RS.

(b) DEF Ltd. has implemented a strategy to manage its exposure to fluctuating interest rates by engaging in both interest rate caps and floors. 7

The company has purchased $ 50,00,000 (i.e. call options on interest rates) cap of 8% at a premium of 0.75% of the face value to protects against rising interest rates. $ 50,00,000 (i.e. put options on interest rates) floor of 5% is also available at a premium of 0.85% of face value.

You are required to analyze the following situation:

(i) If Interest rate rise to 10 percent, what is the amount received by DEF Ltd. ? What are the net savings from the cap ?

(ii) If DEF Ltd. also purchases a floor, what are net savings if interest rate rises to 10% ?

(iii) Calculate net savings if interest rates fall to 4 percent considering cap & floor both purchase.

(iv) If DEF Limited has purchases the cap and sell the floor and there is price rise is 11%, what will be net saving to the company ?
