CA FINAL

GROUP I – PAPER 2

ADVANCED FINANCIAL MANAGEMENT

(Series 2)

Time Allowed: - 3 Hours **Maximum Marks: 100**

This question paper comprises two parts, Part I and Part II.
Part I comprises MCQ & Part II comprises questions which require descriptive answers.

PART – I (MCQs)

All MCQs are compulsory

Question no. 1-15 carry 2 marks each

Case Study 1

Doland Duck Bank Ltd., a rather influential Indian bank known for its unusual branding but serious forex operations, is deeply involved in international trade settlements. It maintains different types of current accounts in foreign currencies to handle cross-border transactions. For instance:

It holds a USD account with German Shepherd Bank in New York,

Maintains an INR account for Cherdogan Bank of Turkey in Delhi, and

Routinely processes payments on behalf of Charmelon Bank (UK) via Kimjon Bank (USA) as an intermediary.

Recently, Doland Duck Bank processed a payment of USD 1 million to a US drone supplier on behalf of Rubbish Kumar Ltd., a proudly chaotic Indian defense importer. The funds were routed through Doland Duck's Nostro account with German Shepherd Bank.

In another transaction, Doland Duck Bank remitted EUR 500,000 to a bank in Paris, instructed by Charmelon Bank, for investment in Dogistaan's secret tech. Meanwhile, Rubbish Kumar Ltd., which exports equipment to Europe and imports batteries from Japan, has suffered losses due to euro depreciation but gained from a drop in the yen.

Now panicking slightly, Rubbish Kumar Ltd.'s CFO wants Doland Duck Bank to help assess its foreign exchange exposure, including transaction, translation, and economic risks.

You are required to answer the following:

1. **Doland Duck Bank's USD account with German Shepherd Bank in New York is a**

   A. Nostro Account

   B. Vostro Account

   C. Loro Account

   D. Euroclear Account

2. **The INR account maintained by Cherdogan Bank with Doland Duck Bank in India is a**

   A. Nostro Account

B. Vostro Account

C. Loro Account

D. Revaluation Account

3. **The transaction where Doland Duck Bank remits EUR 500,000 to Paris on behalf of Charmelon Bank UK via Kimjon Bank USA is a**

A. Nostro Transaction

B. Loro Transaction

C. Vostro Transaction

D. Parallel Banking Transaction

4. **Rubbish Kumar Ltd. is facing losses on euro receivables and gains on yen-based imports. It is leading to operating losses. This type of exposure is known as**

A. Transaction Exposure

B. Economic Exposure

C. Translation Exposure

D. Temporary Exposure

Case Study 2

Ms. Gabbi is working with an MNC at Mumbai. She is well versant with the portfolio management techniques and wants to test one of the techniques on an equity fund she has constructed and compare the gains and losses from the technique with those from a passive buy and hold strategy. The fund consists of equities only and the ending NAVs of the fund she constructed for the last 10 months are given below:

Month Ending	NAV (₹/unit)	Month Ending	NAV (₹/unit)
December 2023	40.00	May 2024	37.00
January 2024	25.00	June 2024	42.00
February 2024	36.00	July 2024	43.00
March 2024	32.00	August 2024	50.00
April 2024	38.00	September 2024	52.00

Assume Gabbi had invested a notional amount of ₹ 2 lakhs equally in the equity fund and a conservative portfolio (of bonds) in the beginning of December 2023 and the total portfolio was being rebalanced each time the NAV of the fund increased or decreased by 15%.

You are required to answer the following:

5. **What was the initial investment amount Ms. Sunidhi allocated to the equity fund at the beginning of December 2023?**

A. ₹ 1,50,000

B. ₹ 2,00,000

C. ₹ 1,00,000

D. ₹ 50,000

6. **At the end of September 2024, what was the approximate total value of the portfolio following the Constant Ratio Plan?**

A. ₹ 2,35,929

B. ₹ 2,40,648

C. ₹ 2,60,000

D. ₹ 2,17,162

7. How many units of the aggressive portfolio did Ms. Sunidhi hold after the final rebalancing in September 2024?

A. 2,753.47 units

B. 2,359.29 units

C. 3,250 units

D. 2,681.01 units

8. Which strategy yielded a higher ending portfolio value by the end of September 2024?

A. Constant Ratio Plan

B. Buy and Hold Strategy

C. Both yielded the same value

D. Neither, the portfolio lost value

9. At an NAV of ₹25 in January 2024, how many units did Ms. Sunidhi hold in her equity portfolio before any rebalancing action?

A. 1,500 units

B. 4,000 units

C. 2,000 units

D. 2,500 units

Case Study 3

As of December 31, 2025, two prominent mutual funds D Mutual Fund Ltd. and K Mutual Fund Ltd. each manage close-ended equity schemes with distinct portfolio compositions and market valuations. The net asset value (NAV) of D Mutual Fund Ltd.'s equity scheme stands at ₹ 70.71 per unit, predominantly comprised of 99% equity holdings, with the remaining balance held in cash or cash equivalents. In comparison, K Mutual Fund Ltd.'s equity scheme has a NAV of ₹ 62.50 per unit, with a slightly lower equity allocation of 96%, complemented by a higher cash reserve. These differences in portfolio allocation, coupled with varying risk-return metrics and fund management strategies, form the basis for analyzing their performance and resilience against market fluctuations. Additional key data such as Sharpe ratios, Treynor ratios, and standard deviations further characterize their risk-adjusted returns and market sensitivities, providing valuable insights for investors evaluating these funds.

Particular	Equity Scheme – D Mutual Fund Ltd.
Sharpe Ratio	2
Treynor Ratio	15
Standard deviation	11.25

There is no change in portfolios during the next month and annual average cost is ₹ 3 per unit for the schemes of both the Mutual Funds.

If Share Market goes down by 5% within a month, calculate expected NAV after a month for the schemes of both the Mutual Funds.

For calculation, consider 12 months in a year and ignore number of days for particular month.

You are required to answer the following:

10. What is the expected NAV of D Mutual Fund Ltd. at the end of the month?

A. ₹ 65.21

B. ₹ 70.46

C. ₹ 64.75

D. ₹ 66.95

11. What is the Beta of K Mutual Fund Ltd., given its Sharpe Ratio is 3.3, standard deviation is 5, and Treynor Ratio is 15?

A. 1.50

B. 1.20

C. 1.00

D. 1.10

12. What is the total percentage drop in the equity component of D Mutual Fund Ltd.?

A. 5.00%

B. 6.00%

C. 7.50%

D. 8.25%

Case Study 4

An Indian company obtains the following quotes (₹/$)

Spot:	35.90/36.10
3 - Months forward rate:	36.00/36.25
6 - Months forward rate:	36.10/36.40

The company needs $ funds for six months. Determine whether the company should borrow in $ or ₹ Interest rates are:

3 - Months interest rate:	₹ : 12%, $: 6%
6 - Months interest rate:	₹ : 11.50%, $: 5.5%

For the purpose of calculation, Take the units of dollar and rupee as 100 each.

You are required to answer the following:

13. If the company borrows $ 100, what will be the total cash outflow in Indian Rupees?

A. ₹ 3,740.10

B. ₹ 3,817.58

C. ₹ 3,610.00

D. ₹ 3,675.00

14. Comparing borrowing in Indian Rupees, which borrowing option should the company choose based on cash outflow?

A. Borrow in ₹, since ₹ outflow is less

B. Borrow in $ as ₹ borrowing outflow is higher

C. Borrow in ₹, since exchange rate risk is lower

D. Borrow in $, since $ interest rate is higher

15. What should be the approximate 3-month forward interest rate on the Rupee borrowing

after the initial 3 months to make the company indifferent between borrowing for 3 months and 6 months?

A. 2.67% (quarterly) or 10.68% (annualized)

B. 3.00% (quarterly) or 12.00% (annualized)

C. 1.23% (quarterly) or 4.93% (annualized)

D. 5.50% (quarterly) or 22.00% (annualized)

PART – II (Descriptive Answers)

This part comprises 6 questions. Question No. 1 is compulsory. Attempt any 4 questions out of the remaining 5 questions.

Question 1A **(6 Marks)**

On April 3, 2022, a Bank quotes the following:

Spot exchange Rate (US $1)	INR 66.2525	INR 67.5945
2 months' swap points	70	90
3 months' swap points	160	186

In a spot transaction, delivery is made after two days.

Assume spot date as April 5, 2022.

Assume 1 swap point = 0.0001

You are required to:

(i) ascertain swap points for 2 months and 15 days. (For June 20, 2022),

(ii) determine foreign exchange rate for June 20, 2022, and

(iii) compute the annual rate of premium/discount of US$ on INR, on an average rate.

Question 1B **(4 Marks)**

Mr. Alex, a practicing Chartered Accountant, can earn a return of 15 percent by investing in equity shares on his own. He is considering a recently announced equity based mutual fund scheme in which initial expenses are 6 percent and annual recurring expenses are 2 percent.

(i) How much should the mutual fund earn to provide Mr. Alex a return of 15 percent per annum?

(ii) Mr. Alex's current Annual Professional Income is ₹ 40 Lakhs. His portfolio value is ₹ 50 Lakhs and now he is spending 10% of his time to manage his portfolio. If he spends this time on profession, his professional income will go up in same proportion. He is thinking to invest his entire portfolio into a Multicap Fund, assuming fund's NAV will grow at 13% per annum (including dividend).

You are requested to advise Mr. Alex, whether he can invest the portfolio into Multicap Funds? If so, what is the net financial benefit?

Question 1C **(4 Marks)**

"A Limited Partnership Entity, in India, is not recognized for the purpose of Venture Capital Fund." Do you agree? Briefly explain the structure of Venture Capital Fund in India.

Question 2A **(6 Marks)**

A Ltd. wants to acquire T Ltd. and has offered a swap ratio of 1:2 (0.5 shares for every one share of T Ltd.). Following information is provided:

	A Ltd.	T Ltd.
Profit after tax	₹ 18,00,000	₹ 3,60,000
Equity shares outstanding (Nos.)	6,00,000	1,80,000

EPS	₹ 3	₹ 2
PE Ratio	10 times	7 times
Market Price per share	₹ 30	₹ 14

Required:

(i) The number of equity shares to be issued by A Ltd. for acquisition of T Ltd.

(ii) What is the EPS of A Ltd. after the acquisition?

(iii) Determine the equivalent earnings per share of T Ltd.

(iv) What is the expected market price per share of A Ltd. after the acquisition, assuming its PE multiple remains unchanged?

(v) Determine the market value of the merged firm.

(vi) If you are the shareholder of T Ltd. and holding 100 shares, will you be interested to sell your stake? Why?

Question 2B **(4 Marks)**

Following Financial data are available for PQR Ltd. for the year 2022:

	(₹ in lakh)
8% debentures	125
10% bonds (2021)	50
Equity shares (₹ 10 each)	100
Reserves and Surplus	300
Total Assets	600
Assets Turnover ratio	1.1
Effective interest rate	8%
Effective tax rate	40%
Operating margin	10%
Dividend payout ratio	16.67%
Current market Price of Share	₹ 14
Required rate of return of investors	15%

You are required to:

(i) Draw income statement for the year

(ii) Calculate its sustainable growth rate of earnings

(iii) Calculate the fair price of the Company's share using dividend discount model, and

(iv) What is your opinion on investment in the company's share at current price?

Note: Present amounts in ₹ lakhs wherever required

Question 2C **(4 Marks)**

"The starting point of an organisation is money and the end point of that organization is also money". Explain the statement to clearly understand this interface of strategic management and financial policy.

Question 3A **(6 Marks)**

The following information are available with respect of Krishna Ltd.

Year	Krishna Ltd.		Market		Return on Govt. Bonds
	Average share price (₹)	Dividend per Share (₹)	Average Index	Dividend Yield	
2020	245	20	2013	4%	7%
2021	253	22	2130	5%	6%
2022	310	25	2350	6%	6%
2023	330	30	2580	7%	6%

Compute Beta Value of the Krishna Ltd. at the end of 2023 and state your observation.

Question 3B **(4 Marks)**

Eagle Ltd. reported a profit of ₹ 77 lakhs after 30% tax for the financial year 2024-25. An analysis of the accounts revealed that the income included extraordinary items of ₹ 8 lakhs and an extraordinary loss of ₹ 10 lakhs. The existing operations, except for the extraordinary items, are expected to continue in the future. In addition, the results of the launch of a new product are expected to be as follows:

	₹ in lakhs
Sales	70
Material costs	20
Labour costs	12
Fixed costs	10

You are required to:

(i) Calculate the value of the business, given that the capitalization rate is 14%.

(ii) Determine the market price per equity share, with Eagle Ltd.'s share capital being comprised of 1,00,000 at 13% preference shares of ₹ 100 each and 50,00,000 equity shares of ₹ 10 each and the P/E ratio being 10 times.

Note: Present calculations in ₹ lakh

Question 3C **(4 Marks)**

"The process of securitization can be viewed as process of creation of additional financial product of securities in the market backed by collaterals." What are the other features? Describe.

Question 4A **(6 Marks)**

Ambani Infra Projects Pvt. Ltd., an Indian Company, is a top notch multinational engaged in the construction of Infrastructure Projects. Board of Directors of the company is proposing to construct a Ship Yard in Malaysia. The following information is available regarding this project:

The initial investment will be in purchase of following equipments.

Equipments	Costing (USD)	Economic Life
Hydraulic and electric actuators	100 Lakhs	10 Years
Engines	85 Lakhs	10 Years
Other Equipments	65 Lakhs	10 Years

The shipyard project will generate income from following two major sources as:

Sources	EBITDA to be collected p.a. (Projected Amount in USD)	Period
Shipbuilding	19 Lakhs	20 Years
Ship Repair	14 Lakhs	20 Years

To encourage investment, Malaysian government is offering a 15 year term loan of USD 150 lakhs at an interest rate of 6 per cent per annum. The interest is to be paid annually. The loan will be repaid at the end of 15 year in one tranche.

The required rate of return for the project under all equity financing is 12 per cent per annum. Post tax cost of debt is 5.6 per cent per annum.

The depreciation on the equipments will be charged on straight line method. Corporate Tax Rate is 30 per cent. All cash Flows will be in USD. Ignore inflation.

You are required to advise the management on the viability of the proposal by using Adjusted NPV method (Consider PV of overall impact of Financing by Debt).

Given, PVIFA (12%, 10) = 5.650, PVIFA (12%, 20) = 7.469, PVIFA (8%, 15) = 8.559, PVIF (8%, 15) = 0.315.

Question 4B **(4 Marks)**

On 1 April 2015, Sunidhi was holding a portfolio of 10 securities whose value was ₹ 9,94,450, the weighted average of beta of 9 securities was 1.10.

Since she was expecting a fall in the prices of the shares in near future to hedge her portfolio, she sold 5 contract of NIFTY Futures (Multiplier of 25) expiring in May 2015, which was trading at 8,767.07 on 1 April.

(a) Calculate the beta of the 10th security.

(b) Reconcile the reasons in spite of 2% fall in the market as per Sunidhi's apprehension if she would have earned some profit on her cash position.

Question 4C **(4 Marks)**

TRC Cables Ltd. (an Indian Company) is in the business of manufacturing Electrical Cables and Data Cables including Fiber Optics cables. While mainly it exports the manufactured cables to other countries it has also established its production facilities at some African countries' due availability of raw material and cheap labour there. Some of the major raw material such as copper, aluminum and other non-ferrous metals are also imported from foreign countries. Hence, overall TRC has frequent receipts and expenditure items denominated in Non-INR currencies.

Though TRC make use of Long-Term Debts and Equity to meet its long-term fund requirements but to finance its operations it make use of short-term financial instruments such as Commercial Papers, Bank Credit and Term Loans from the banks etc. If any surplus cash is left with TRC it is invested in interest yielding securities. Recently due to stiff competition from its competitors TRC has relaxed its policy for granting credit and to manage receivables it has formed a separate credit division.

Evaluate the major risks to which TRC Ltd. is exposed to.

Question 5A **(7 Marks)**

Sohan was employed with Sohanlal Portfolio Consultants. The work profile of Sohan involves advising the clients about taking position in Future Market to obtain hedge in the position they are holding. Mr. Fool, their regular client purchased 200,000 shares of Antargyan Ltd. at a price of ₹ 22 and sold 100,000 shares of Arride Tech Ltd. for ₹ 40 each having beta 2. Sohan advised Mr. Fool to take short position in Index Future trading at ₹ 1,000 each contract.

Though Sohan noted the name of Arride Tech Ltd. along with its beta value during discussion with Mr. Fool but forgot to record the beta value of Antargyan Ltd.

On next day Mr. Fool closed out his position when:

- Share price of Antargyan Ltd. dropped by 2%
- Share price of Arride Tech Ltd. appreciated by 3%
- Index Future dropped by 1.5%

Mr. Fool, informed Sohan that he has made a loss of ₹ 229,000 due to the position taken. Since record of Sohan was incomplete he approached you to help him to find the number of contract of Future contract he advised Mr. Fool to be short to obtain a complete hedge and beta value of Antargyan Ltd.

You are required to find these values.

Question 5B **(7 Marks)**

K Ltd. currently operates from 4 different buildings and wants to consolidate its operations into one building which is expected to cost ₹ 90 crores. The Board of K Ltd. had approved the above plan and to fund the above cost, agreed to avail an External Commercial Borrowing (ECB) of GBP 10 million from G Bank Ltd. on the following conditions:

- The Loan will be availed on 1st April, 2022 with interest payable on half yearly rest.
- Average Loan Maturity life will be 3.4 years with an overall tenure of 5 years.
- Upfront Fee of 1.20%.
- Interest Cost is GBP 6 months LIBOR + Margin of 2.50%.
- The 6 month LIBOR is expected to be 1.05%.

K Ltd. also entered into a GBP-INR hedge at 1 GBP = INR 90 to cover the exposure on account of the above ECB Loan and the cost of the hedge is coming to 4.00% p.a.

As a Finance Manager, given the above information and taking the 1 GBP = INR 90:

(i) Calculate the overall cost both in percentage and rupee terms on an annual basis.

(ii) What is the cost of hedging in rupee terms?

(iii) If K Ltd. wants to pursue an aggressive approach, what would be the net gain/loss for K Ltd. if the INR depreciates/appreciates against GBP by 10% at the end of the 5 years assuming that the loan is repaid in GBP at the end of 5 years?

Ignore time value and taxes and calculate to two decimals.

Question 6A **(7 Marks)**

Mr. A, a very famous and professional chartist, is analysing BSE Sensex on 21st May 2022 (Wednesday) of the last 6 days i.e. from 15th to 20th May 2022. Following were the closing index values on the respective dates:

Day	Date	Sensex
1	15.05.2022	14522
2	16.05.2022	14925
3	17.05.2022	14925
4	18.05.2022	14925
5	19.05.2022	15222
6	20.05.2022	16000

Further as per BSE Working Model, No Trading is done on weekends. Hence, Sensex value persist as of Last Trading Day Closing Value.

EMA of Sensex on 14th May 2022 was 15000.

Mr. A wants to calculate the following for the last 6 days of Sensex:

(i) Arithmetic Moving Average (AMA)

(ii) Exponential Moving Average (EMA) and give conclusion on this.

Question 6B **(7 Marks)**

NoBank offers a variety of services to both individuals as well as corporate customers. NoBank generates funds for lending by accepting deposits from customers who are paid interest at PLR which keeps on changing.

NoBank is also in the business of acting as intermediary for interest rate swaps. Since it is difficult to identify matching client, NoBank acts counterparty to any party of swap.

Sleepless approaches NoBank who have already have ₹ 50 crore outstanding and paying interest @ PLR+80bp p.a. The duration of loan left is 4 years. Since Sleepless is expecting increase in PLR in coming year, he asked NoBank for arrangement of interest of interest rate swap that will give a fixed rate of interest.

As per the terms of agreement of swap NoBank will borrow ₹ 50 crore from Sleepless at PLR+80bp per annum and will lend ₹ 50 crore to Sleepless at fixed rate of 10% p.a. The settlement shall be made at the net amount due from each other. For this services NoBank will charge commission @ 0.2% p.a. if the loan amount. The present PLR is 8.2%.

You as a financial consultant of NoBank have been asked to carry out scenario analysis of this arrangement.

Three possible scenarios of interest rates expected to remain in coming 4 years are as follows:

	Year 1	Year 2	Year 3	Year 4
Scenario 1	10.25	10.50	10.75	11.00
Scenario 2	8.75	8.85	8.85	8.85
Scenario 3	7.20	7.40	7.60	7.70

Assuming that cost of capital is 10%, whether this arrangement should be accepted or not.