Mock Test Paper - Series I: March, 2026

Date of Paper: 18th March, 2026

Time of Paper: 2 P.M. to 5 P.M.

FINAL COURSE: GROUP – I

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

Time Allowed – 3 Hours **Maximum Marks – 100**

1. *The question paper comprises two parts, Part I and Part II.*
2. *Part I comprises Case Scenario based Multiple Choice Questions (MCQs)*
3. *Part II comprises questions which require descriptive type answers.*

PART I – Case Scenario based MCQs (30 Marks)

Part I is compulsory.

Case Scenario I

P Ltd. is studying the possible acquisition of Q Ltd. which is also in same industry by way of merger. The following data are available:

Firm	After-tax earnings	No. of equity shares	Market price per share	Book Value Per share
P Ltd.	₹ 10,00,000	2,00,000	₹ 75	₹ 210
Q Ltd.	₹ 3,00,000	50,000	₹ 60	₹ 105

Board of Directors of both the companies are in the process of negotiating the terms of proposed merger. In case if P Ltd. considers to buyout Q Ltd. by paying in cash, then it shall borrow the required funds @ 15% rate of interest per annum.

Both companies are in the tax bracket of 35%.

1. In case P Ltd. wants to be sure that its EPS is not diminished by the merger, the relevant exchange ratio to achieve the same objective should be.....

   (a) 0.33

   (b) 1.20

   (c) 1.30

   (d) 1.10

2. The type of Merger of P Ltd. & Q Ltd. shall be ……..

   (a) Horizontal Merger

   (b) Vertical Merger

   (c) Congeneric Merger

   (d) Reverse Merger

3. Suppose if P Ltd. is exchanging its share on one-to-one basis for Q Ltd. and post-merger there is no change in PE Ratio of any of the company then post-merger market capitalization shall be …….

   (a) ₹ 125.00 Lakh

   (b) ₹ 130.00 Lakh

   (c) ₹ 187.50 Lakh

   (d) ₹ 195.00 Lakh

4. Suppose if P Ltd. is offering about ₹ 35 Lakh to Q Ltd. for the proposed acquisition it will result in…….

   (a) EPS accretion

   (b) EPS dilution

   (c) No Change

   (d) Risk free EPS

5. Suppose instead of a friendly takeover, P Ltd. attempts a hostile takeover of Q Ltd. To defend itself, Q Ltd. offers substantial compensation to its managers in the event they are removed due to the takeover. This defensive tactic adopted by Q Ltd. is called…….

   (a) Crown Jewels

   (b) Poison Pill

   (c) White Knight

   (d) Golden Parachutes **(5 x 2 = 10 Marks)**

Case Scenario II

Mr. A is interested in investing ₹ 10,00,000 for which he is considering following three alternatives:

(i) Invest ₹ 10,00,000 in Mutual Fund X (MFX)

(ii) Invest ₹ 10,00,000 in Mutual Fund Y (MFY)

(iii) Portfolio - Invest ₹ 6,00,000 in Mutual Fund X (MFX) and ₹ 4,00,000 in Mutual Fund Y (MFY)

Average annual return earned by MFX and MFY is 12% and 11% respectively. Risk free rate of return is 8% and market rate of return is 10%.

Covariance of returns of MFX, MFY and market portfolio Mix are as follow:

	MFX	MFY	Mix
MFX	4.400	4.300	3.370
MFY	4.300	4.200	2.800
Mix	3.370	2.800	4.200

Based on the above information answer the following questions:

6. Standard Deviation of Market Mix Portfolio is …….

   (a) 2.0736

   (b) 2.0976

   (c) 1.8358

   (d) 2.0494

7. Beta of MFY will be approximately…….

   (a) 1.024

   (b) 1.048

   (c) 1.065

   (d) 0.667

8. Based on CAPM, MFX is:

   (a) Overvalued

   (b) Undervalued

   (c) Correctly valued

   (d) Risk free

9. If Mr. A invests only in MFY, the risk premium earned would be:

   (a) 2%

(b) 3%

(c) 1.33%

(d) 4%

10. The portfolio beta (60% in MFX and 40% in MFY) would be approximately:

(a) 0.748

(b) 0.802

(c) 0.900

(d) 0.667 **(5 x 2 = 10 Marks)**

Case Scenario III

X and Y are two friends. Since Y has earned a lot of profit from trading in financial derivative market, X is also considering speculating on Gamma Corporation's shares which is currently trading at ₹ 700 per share through taking positions in options in stocks of same company. Accordingly, X took following contract positions in the options on Gama Corporation's stock:

(i) Purchasing one contract of 2-month call option with a premium of ₹ 35 and an exercise price of ₹ 750.

(ii) Purchasing one contract of 2-month put option with a premium of ₹ 25 and an exercise price of ₹ 600.

After some time, trading in Option Market and understanding the nitty-gritties of same, X being CEO in an organization advised his team to implement the concept of Financial Options in the Capital Budgeting decisions called 'Real Option'.

Note: Contract size of each option contract is 100.

Based on the above information answer the following questions:

11. If the share price after two months rises to ₹ 800, the net pay-off to X will be…….

(a) ₹ 1,500 profit

(b) ₹ 1,000 profit

(c) ₹ 1,000 loss

(d) ₹ 1,500 loss

12. If the share price remains between ₹ 600 and ₹ 750 at maturity, X will…….

(a) Earn profit

(b) Incur loss equal to total premium

(c) Break even

(d) Earn unlimited profit

13. The upper break-even price for X's strategy will be……

(a) ₹ 785

(b) ₹ 810

(c) ₹ 760

(d) ₹ 775

14. In Real Options, the "option to abandon" is similar to……

(a) Call option

(b) Put option

(c) Forward contract

(d) Swap

15. Real options add value to a project primarily because they……..

(a) Reduce accounting profits

(b) Ignore uncertainty

(c) Capture managerial flexibility

(d) Eliminate business risk **(5 x 2 = 10 Marks)**

PART – II DESCRIPTIVE QUESTIONS

Question No.1 is compulsory. Candidates are required to answer any four questions from the remaining five questions.

Working notes should form part of the answers.

Maximum Marks – 70 Marks

1. (a) KLM Ltd., is considering taking up one of the two projects-Project-A and Project-B. Both the projects having same life require equal investment of ₹ 8.00 crore each. Both are estimated to have almost the same yield. As the company is new to this type of business, the cash flow arising from the projects cannot be estimated with certainty. An attempt was therefore, made to use probability to analyse the pattern of cash flow from other projects during the first year of operations. This pattern is likely to continue during the life of these projects. The results of the analysis are as follows:

Project A		Project B	
Cash Flow (in ₹ Crore)	Probability	Cash Flow (in ₹ Crore)	Probability
1.10	0.10	0.90	0.10
1.30	0.20	1.30	0.25
1.50	0.40	1.70	0.30
1.70	0.20	2.10	0.25
1.90	0.10	2.50	0.10

Advise which of the two projects is riskier? **(6 Marks)**

(b) In International Monetary Market an international forward bid for December 15 on pound sterling is $ 1.2816 at the same time that the price of IMM sterling future for delivery on December 15 is $ 1.2806. The contract size of pound sterling is £ 62,500. Suggest how could the dealer use arbitrage in profit from this situation and how much profit is earned? **(4 Marks)**

(c) State the difference between Peer-to-peer lending and Crowdfunding? **(4 Marks)**

2. (a) EFD Ltd. is an export business house. The company prepares invoice in customers' currency. Its debtors of US$. 10,000,000 is due on April 1, 2025.

Market information as at January 1, 2025 is:

Exchange rates US$/INR		Currency Futures US$/INR	
Spot	0.011765	Contract size:	₹ 35,66,334
1-month forward	0.011627	1-month	0.011617
3-months forward	0.011227	3-month	0.011216
	Initial Margin	**Interest rates in India**	
1-Month	₹ 1,750	6.5%	
3-Months	₹ 2,250	7%	

On April 1, 2025, the spot rate US$/INR is 0.011234 and currency future rate is 0.011232.

Which of the following methods would be most advantageous to EFD Ltd?

(i) Using forward contract

(ii) Using currency futures

(iii) Not hedging the currency risk **(10 Marks)**

(b) Financial Risk can be evaluated from different points of views. Explain. **(4 Marks)**

3. (a) Following Financial data are available for PQR Ltd. for the year 2018:

	(₹ in lakh)
8% debentures	1250
10% bonds (2017)	500
Equity shares (₹ 100 each)	1000
Reserves and Surplus	3000
Total Assets	6000
Assets Turnovers ratio	1.1
Effective interest rate	8%
Effective tax rate	40%
Operating margin	10%
Dividend pay-out ratio	16.67%
Current market Price of Share	₹ 140
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? **(10 Marks)**

(b) Critically evaluate the various types of risks inherent in a Securitization transaction. **(4 Marks)**

4. (a) Eagle Ltd. reported a profit of ₹ 770 lakhs after 30% tax for the financial year 2021-22. An analysis of the accounts revealed that the income included extraordinary items of ₹ 80 lakhs and an extraordinary loss of ₹ 100 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	700
Material costs	200

Labour costs	120
Fixed costs	100

You are required to suggest the value of the business, given that the capitalization rate is 14%. **(6 Marks)**

(b) State the challenges to the Efficient Market Theory. **(4 Marks)**

Either

(c) State the key decisions falling within the scope of financial strategy.

Or

Critically examine the concept of Credit Default Swaps (CDSs). Analyze their structural features and evaluate the key purposes for which CDS instruments are used in modern financial markets. (**4 Marks)**

5. (a) A multinational company is planning to set up a subsidiary company in India (where hitherto it was exporting) in view of growing demand for its product and competition from other MNCs. The initial project cost (consisting of Plant and Machinery including installation) is estimated to be US$ 500 million. The net working capital requirements are estimated at US$ 50 million. The company follows straight line method of depreciation. Presently, the company is exporting two million units every year at a unit price of US$ 80, its variable cost per unit being US$ 40.

The Chief Financial Officer has estimated the following operating cost and other data in respect of proposed project:

(i) Variable operating cost will be US $ 20 per unit of production.

(ii) Additional cash fixed cost will be US $ 30 million p.a. and project's share of allocated fixed cost will be US $ 3 million p.a. based on principle of ability to share.

(iii) Production capacity of the proposed project in India will be 5 million units.

(iv) Expected useful life of the proposed plant is five years with no salvage value.

(v) Existing working capital investment for production & sale of two million units through exports was US $ 15 million.

(vi) Export of the product in the coming year will decrease to 1.5 million units in case the company does not open subsidiary company in India, in view

of the presence of competing MNCs that are in the process of setting up their subsidiaries in India.

(vii) Applicable Corporate Income Tax rate is 35%, and

(viii) Required rate of return for such project is 12%.

Assuming that there will be no variation in the exchange rate of two currencies and all profits will be repatriated, as there will be no withholding tax, estimate Net Present Value (NPV) of the proposed project in India.

Present Value Interest Factors (PVIF) @ 12% for five years are as below:

Year	1	2	3	4	5
PVIF	0.8929	0.7972	0.7118	0.6355	0.5674

(10 Marks)

(b) Advise Mr. S a speculator the net position to be taken on the Index Future that will give a complete hedge against the following transactions:

(i) He has a long position in the share on the cash market of ₹ 50 lakhs on the R Limited. The beta of the R Limited is 1.25 and it is expected that the prices its shares is going to rise.

(ii) He has a short position on the cash market of ₹ 25 lakhs on the W Limited. The beta of the W Limited is 0.90 and it is expected that the prices its shares is going to depreciate. **(4 Marks)**

6. (a) Mr. A will need ₹ 1 Crore after two years for which he wants to make one-time necessary investment now. He has a choice of two types of bonds. Their details are as below:

	Bond X	Bond Y
Face value	₹ 1,00,000	₹ 1,00,000
Coupon	7% payable annually	8% payable annually
Years to maturity	1	4

Advice Mr. A whether he should invest all his money in one type of bond or he should buy both the bonds and, if so, in which quantity?

Note: 1. Assume that there will not be any call risk or default risk and both Bonds are trading at yield of 10%.

2. All calculations should be rounded off to three decimal places. However, the number of bonds should be rounded off to the nearest whole number, without any fractional value. **(8 Marks)**

(b) Suppose a dealer quotes 'All-in-cost' for a generic swap at 8% against six month SOFR flat. If the notional principal amount of swap is $ 5 Million.

(i) Calculate semi-annual fixed payment.

(ii) Find the first floating rate payment for (i) above if the six-month period from the effective date of swap to the settlement date comprises 181 days and that the corresponding SOFR was 6% on the effective date of swap.

In (ii) above, if the settlement is on 'Net' basis, how much the fixed rate payer would pay to the floating rate payer?

Note: 1. Generic swap is based on 30/360 days basis.

2. All calculations should be rounded off to three decimal places. However, the final amounts should be rounded off to the nearest whole number, without any fractional value. **(6 Marks)**

Mock Test Paper - Series I: March, 2026

Date of Paper: 18th March 2026

Time of Paper: 2 P.M. to 5 P.M.

FINAL COURSE: GROUP – I

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

ANSWER TO PART – I CASE SCENARIO BASED MCQS

1. Option (b)

2. Option (a)

3 Option (d)

4. Option (b)

5. Option (d)

6. Option (d)

7. Option (d)

8. Option (b)

9. Option (b)

10. Option (a)

11. Option (c)

12. Option (b)

13. Option (b)

14. Option (b)

15. Option (c)

ANSWERS OF PART – II DESCRIPTIVE QUESTIONS

1. (a) Calculation of Variance and Standard Deviation

Project A

Expected Net Cash Flow

= (0.10 x 1.10) + (0.20 x 1.30) + (0.40 x 1.50) + (0.20 x 1.70) + (0.10 x 1.90)

= 0.11 + 0.26 + 0.60 + 0.34 + 0.19 = 1.50

$$\sigma^2 = 0.10(1.10 - 1.50)^2 + 0.20(1.30 - 1.50)^2 + 0.40(1.50 - 1.50)^2 + 0.20\ (1.70 - 1.50)^2 + 0.10(1.90 - 1.50)^2$$

= 0.016 + 0.008 + 0 + 0.008 + 0.016 = 0.048

$\sigma = \sqrt{0.048} = 0.219$

Project B

Expected Net Cash Flow

= (0.10 X 0.90) + (0.25 X 1.30) + (0.30 X 1.70) + (0.25 X 2.10) + (0.10 X 2.50)

= 0.09 + 0.325 + 0.51 + 0.525 + 0.25 = 1.70

$$\sigma^2 = 0.1\ (0.90 - 1.70)^2 + 0.25(1.30 - 1.70)^2 + 0.30\ (1.70 - 1.70)^2 + 0.25(2.10 - 1.70)^2 + 0.10(2.50 - 1.70)^2$$

= 0.064 + 0.04 + 0 + 0.04 + 0.064 = 0.208

$\sigma = \sqrt{0.208} = 0.456$

Calculation of Coefficient of Variation

$$\text{Coefficient of Variation} = \frac{\text{Standard Deviation}}{\text{Mean}}$$

$$\text{Project A} = \frac{0.219}{1.50} = 0.146$$

$$\text{Project B} = \frac{0.456}{1.70} = 0.268$$

Project B is riskier as it has higher Coefficient of Variation.

(6 marks)

(b)

Buy £ 62500 × 1.3345	= $ 83,406.25
Sell £ 62500 × 1.3355	= $ 83,468.75
Profit	= $ 62.50

(4 marks)

(c) **Peer-to-peer lending:** In this process a group of people come together and lend money to each other. Peer to peer lending has been there for many years. Many small and ethnic business groups having similar faith or interest generally support each other in their start up endeavors.

Crowdfunding: Crowdfunding is the use of small amounts of capital from a large number of individuals to finance a new business initiative. Crowdfunding makes use of the easy accessibility of vast networks of people through social media and crowdfunding websites to bring investors and entrepreneurs together.

(4 marks)

2. (a) (i) Receipts using a forward contract

= $10,000,000/0.01127 = ₹ 89,07,09,896

(ii) Receipts using currency Futures

The number of contracts needed is ($10,000,000/0.011216)/3566334 = 250

Initial margin payable is 250 contracts x ₹ 2,250 = ₹ 5,62,500

On April 1,2025 Close at 0.011232

Receipts = US$10,000,000/0.011232	= ₹ 89,03,13,390
Variation Margin =	
[(0.011232 – 0.011216) x 250 x 35,66,334/-]/0.011234	
OR (0.000016x 250 x 35,66,334)/.011234	
= 9926.79/0.011234	= ₹ 12,69,836
Less: Interest Cost – ₹ 5,62,500x 0.07 x 3/12	= ₹ 9,844
Net Receipts	₹ 89,15,73,382

(iii) Receipts under different methods of hedging

Forward contract	₹ 89,07,09,896
Futures	₹ 89,15,73,382
No hedge (US$ 10,000,000/0.011234)	₹ 89,01,54,887

The most advantageous option would have been to hedge with Futures.

(10 marks)

(b) The financial risk can be evaluated from different point of views as follows:

(i) From stakeholder's point of view: Major stakeholders of a business are equity shareholders and they view financial gearing i.e. ratio of debt in

capital structure of company as risk since in event of winding up of a company they will be least prioritized.

Even for a lender, existing gearing is also a risk since company having high gearing faces more risk in default of payment of interest and principal repayment.

(ii) From Company's point of view: From company's point of view if a company borrows excessively or lend to someone who defaults, then it can be forced to go into liquidation.

(iii) From Government's point of view: From Government's point of view, the financial risk can be viewed as failure of any bank or (like Lehman Brothers) down grading of any financial institution leading to spread of distrust among society at large. Even this risk also includes willful defaulters. This can also be extended to sovereign debt crisis. **(4 marks)**

3. (a) Workings:

Asset turnover ratio	= 1.1
Total Assets	= ₹ 6000
Turnover ₹ 600 lakhs × 1.1	= ₹ 6600 lakhs
Effective interest rate	= $\frac{\text{Interest}}{\text{Libilities}} = 8\%$
Liabilities	= ₹ 1250 lakhs + 500 lakhs = 1750 lakh
Interest	= ₹ 1750 lakhs × 0.08 = ₹ 140 lakh
Operating Margin	= 10%
Hence operating cost	= (1 - 0.10) ₹ 6600 lakhs = ₹ 5940 lakh
Dividend Payout	= 16.67%
Tax rate	= 40%

(i) Income statement

	(₹ Lakhs)
Sale	6600.00
Operating Exp	5940.00
EBIT	660.00
Interest	140.00

EBT	520.00
Tax @ 40%	208.00
EAT	312.00
Dividend @ 16.67%	52.00
Retained Earnings	260.00

(ii) SGR = ROE (1-b)

ROE = $\frac{PAT}{NW}$ and NW = ₹ 1000 lakhs + ₹ 3000 lakhs = ₹ 4000 lakhs

ROE = $\frac{312 lakhs}{4000 lakhs}$ x 100 = 7.8%

SGR = 0.078(1 - 0.1667) = 6.5% or $\frac{0.078 \times 0.8333}{1-0.078 \times 0.8333}$ = 6.95%

(iii) Calculation of fair price of share using dividend discount model

$P_o = \frac{D_O(1+g)}{k_e - g}$

Dividends = $\frac{52 \text{ lakhs}}{10 \text{ lakhs}}$ = ₹ 5.20

Growth Rate = 6.5% or 6.95%

Hence $P_o = \frac{5.20(1+0.065))}{0.15-0.065} = \frac{5.538}{0.085}$ = ₹ 65.15

or $\frac{5.20(1+0.0695))}{0.15-0.0695} = \frac{5.5614}{0.0805}$ = ₹ 69.09

(iv) Since the current market price of share is ₹ 140, the share is overvalued. Hence the investor should not invest in the company. **(10 marks)**

(b) In a securitization transaction, investors are exposed to several risks at each stage of the transaction. The various types of risks in any securitization transaction are as follows:

(1) Credit risk or Counterparty risk

It is the prime risk wherein investors are prone to the risk of bankruptcy and non-performance of the servicer.

(2) Legal risks

Since in the Indian context it is a recently developed concept there is an absence of conclusive judicial precedent or explicit statutory provisions on securitization transactions. As a result, any dispute over the legal ownership of the assets is likely to result in uncertainty regarding investor pay-outs from the pool cash flow.

(3) Market risks

Market risks represent risks external to the transaction and include market-related factors that impact the performance of the transaction. Some of these risks are as follows:

(a) **Macroeconomic risks:** The performance of the underlying loan contracts depends on macroeconomic factors, such as industry downturns or adverse price movements of the underlying assets. For example, in the transportation industry a continuous decline in industrial production may lead to a downtrend in the use of services of the Commercial Vehicles (CVs) adversely impacting the cash flow of CVs operators. This in turn, may impact repayments on CV loans. Similarly, a fall in the prices of the CVs may increase chances of default as the borrower may wilfully default the loan and let the finance company repossess and sell the underlying vehicle instead of retaining it and continuing to pay instalments on time.

(b) **Prepayment risks:** A change in the market interest rate represents a difficult situation for investors because it is a combination of prepayment risk and volatile interest rates. With a reduction in interest rates generally prepayment of retail loans increases, resulting in reinvestment risk for investors because investors may receive their monies ahead of schedule and may not be able to reinvest the amount at the same yield.

(c) **Interest rate risks:** This risk is prominent where the loans in the pool are based on a floating rate and investor pay-outs are based on a fixed rate or vice versa. It results in an interest rate mismatch and can lead to a situation where the pool cash inflow, even at 100% collection efficiency, is not sufficient to meet investor pay-outs. Interest rate swaps can be used to hedge this type of risk to some extent. **(4 Marks)**

4. (a) Computation of Business Value

			(₹ Lakhs)
Profit before tax $\frac{770}{1-0.30}$			1100
Less: Extraordinary income			(80)
Add: Extraordinary losses			100
			1120
Profit from new product		(₹ Lakhs)	
Sales		700	
Less: Material costs	200		
Labour costs	120		
Fixed costs	100	(420)	280
			1400.00
Less: Taxes @30%			420.00
Future Maintainable Profit after taxes			980.00
Relevant Capitalisation Factor			0.14
Value of Business (₹ 980/0.14)			7000

(6 marks)

(b) The Challenges to the Efficient Market Theory are as follows:-

(i) **Information inadequacy** – Information is neither freely available nor rapidly transmitted to all participants in the stock market. There is a calculated attempt by many companies to circulate misinformation.

(ii) **Limited information processing capabilities** – Human information processing capabilities are sharply limited. According to Herbert Simon every human organism lives in an environment which generates millions of new bits of information every second but the bottlenecks of the perceptual apparatus does not admit more than thousand bits per seconds and possibly much less.

David Dreman maintained that under conditions of anxiety and uncertainty, with a vast interacting information grid, the market can become a giant.

(iii) **Irrational Behaviour** – It is generally believed that investors' rationality will ensure a close correspondence between market prices and intrinsic values. But in practice this is not true. J. M. Keynes argued that all sorts of

consideration enter into the market valuation which is in no way relevant to the prospective yield. This was confirmed by L. C. Gupta who found that the market evaluation processes work haphazardly almost like a blind man firing a gun. The market seems to function largely on hit or miss tactics rather than on the basis of informed beliefs about the long term prospects of individual enterprises.

(iv) **Monopolistic Influence** – A market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over prices. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market. **(4 marks)**

(c) The key decisions falling within the scope of financial strategy are as follows:

1. **Financing decisions:** These decisions deal with the mode of financing or mix of equity capital and debt capital.
2. **Investment decisions:** These decisions involve the profitable utilization of firm's funds especially in long-term projects (capital projects). Since the future benefits associated with such projects are not known with certainty, investment decisions necessarily involve risk. The projects are therefore evaluated in relation to their expected return and risk.
3. **Dividend decisions:** These decisions determine the division of earnings between payments to shareholders and reinvestment in the company.
4. **Portfolio decisions:** These decisions involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.

OR

CDS can be defined as an insurance (not in stricter sense) against the risk of default on a debt which may be debentures, bonds etc.

Under this arrangement, one party (called buyer) needing protection against the default pays a periodic premium to another party (called seller), who in turn assumes the default risk. Hence, in case default takes place then there will be settlement and in case no default takes place no cash flow will accrue to the buyer alike option contract and agreement is terminated. Although it resembles the options but since element of choice is not there it more resembles the swap arrangements.

Amount of premium mainly depends on the price of underlying and especially when the credit risk is more.

Following are the main purposes for which CDS can be used:

(i) **Hedging -** Main purpose of using CDS is to neutralize or reduce a risk to which CDS is exposed to. Thus, by buying CDS, risk can be passed on to CDS seller or writer.

(ii) **Arbitrage -** It involves buying a CDS and entering into an asset swap. For example, a fixed coupon payment of a bond is swapped against a floating interest stream.

(iii) **Speculation -** CDS can also be used to make profit by exploiting price changes. For example, a CDS writer assumed risk of default, will gain from contract if credit risk does not materialize during the tenure of contract or if compensation received exceeds potential pay-out. **(4 marks)**

5. **(a)** Financial Analysis whether to set up the manufacturing units in India or not may be carried using NPV technique as follows:

I. Incremental Cash Outflows

	$ Million
Cost of Plant and Machinery	500.00
Working Capital	50.00
Release of existing Working Capital	(15.00)
	535.00

II. Incremental Cash Inflow after Tax (CFAT)

(a) Generated by investment in India for 5 years

	$ Million
Sales Revenue (5 Million x $80)	400.00
Less: Costs	
Variable Cost (5 Million x $20)	100.00
Fixed Cost	30.00
Depreciation ($500Million/5)	100.00
EBIT	170.00
Taxes@35%	59.50
EAT	110.50
Add: Depreciation	100.00
CFAT (1-5 years)	210.50

(b) Cash flow at the end of the 5 years (Release of Working Capital) 35.00

(c) Cash generation by exports (Opportunity Cost)

	$ Million
Sales Revenue (1.5 Million x $80)	120.00
Less: Variable Cost (1.5 Million x $40)	60.00
Contribution before tax	60.00
Tax@35%	21.00
CFAT (1-5 years)	39.00

(d) Additional CFAT attributable to Foreign Investment

	$ Million
Through setting up subsidiary in India	210.50
Through Exports in India	39.00
CFAT (1-5 years)	171.50

III. Determination of NPV

Year	CFAT ($ Million)	PVF@12%	PV ($ Million)
1-5	171.50	3.6048	618.2232
5	35	0.5674	19.8590
			638.0822
Less: Initial Outflow			535.0000
			103.0822

Since NPV is positive the proposal should be accepted. **(10 Marks)**

(b)

Sl. No. (1)	Company Name (2)	Trend (3)	Amount (₹) (4)	Beta (5)	(₹) (6) [(4) x (5)]	Position (7)
(i)	R Ltd.	Rise	50 lakh	1.25	62,50,000	Short
(ii)	W Ltd.	Depreciate	25 lakh	0.90	22,50,000	Long
	Net Position				40,00,000	Short

(4 Marks)

6. (a) Current Price and Duration of Bond X

Year	Cash flow	P.V. @ 10%		Proportion of bond value	Proportion of bond value x time (years)
1	1,07,000	0.909	97263	1.000	1.000

Duration of the Bond is 1 year.

Duration of Bond Y

Year	Cash flow	P.V. @ 10%		Proportion of bond value	Proportion of bond value x time (years)
1	8,000	0.909	7272	0.077	0.077
2	8,000	0.826	6608	0.071	0.142
3	8,000	0.751	6008	0.064	0.192
4	1,08,000	0.683	73764	0.788	3.152
			93652	1.000	3.563

Duration of the Bond is 3.563 years.

Let x_1 be the investment in Bond X and therefore investment in Bond Y shall be $(1 - x_1)$. Since the required duration is 2 years the proportion of investment in each of these two securities shall be computed as follows:

$2 = x_1 + (1 - x_1)\ 3.563$

$x_1 = 0.610$

Accordingly, the proportion of investment shall be 61% in Bond X and 39% in Bond Y respectively.

Amount of investment

Bond X	Bond Y
PV of ₹ 1,00,00,000 for 2 years @ 10% x 61%	PV of ₹ 1,00,000 for 2 years @ 10% x 39%
= ₹ 1,00,00,000 (0.826) x 61%	= ₹ 1,00,00,000 (0.826) x 39%
= ₹ 50,38,600	= ₹ 32,21,400
No. of Bonds to be purchased	No. of Bonds to be purchased
= ₹ 50,38,600 /₹ 97263 = 51.80 i.e. approx. 52 bonds	= ₹ 32,21,400/₹ 93652 = 34.40 i.e. approx. 34 bonds

Note: The investor has to keep the money invested for two years. Therefore, the investor can invest in both the bonds with the assumption that Bond X will be reinvested for another one year on same returns.

Further, in the above computation, Modified Duration can also be used instead of Duration. **(8 Marks)**

(b) **(i)** Semi-annual fixed payment

= (N) (AIC) (Period)

Where N = Notional Principal amount = $ 50,00,000

AIC = All- in- cost = 8% = 0.08

$$= 50,00,000 \times 0.08 \left(\frac{180}{360}\right)$$

= 50,00,000 × 0.08 (0.5)

= 50,00,000 × 0.04 = $ 2,00,000

(ii) Floating Rate Payment

$$= N\,(LIBOR) \left(\frac{dt}{360}\right)$$

$$= 50,00,000 \times 0.06 \times \frac{181}{360}$$

= 50,00,000 × 0.06 (0.503)

= 50,00,000 × 0.0302 = $ 1,51,000

(iii) Net Amount

= (i) – (ii)

= $ 2,00,000 – $ 1,51,000 = $ 49,000 **(6 Marks)**