Mock Test Paper - Series II December, 2025

Date of Paper: 06 December, 2025

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

The data given below relates to a convertible bond:

Face value	₹ 450
Coupon rate	15%
No. of shares per bond	25
Market price of share	₹ 20
Straight value of bond	₹ 400
Market price of convertible bond	₹ 550

From the information given above, choose the correct answer to the following questions:

1. The stock value of bond would be …….
   (a) ₹ 500
   (b) ₹ 400
   (c) ₹ 550
   (d) ₹ 450
2. The percentage of downside risk based on market price of convertible bond is…….
   (a) 10%
   (b) 27.27%

(c) 18.18%

(d) 11.11%

3. The conversion premium is ……

(a) 10%

(b) 27.27%

(c) 18.18%

(d) 11.11%

4. The conversion parity price of the stock is ……..

(a) ₹ 25

(b) ₹ 20

(c) ₹ 22

(d) ₹ 24 **(4 x 2 = 8 Marks)**

Case Scenario II

Grow More Ltd. an NBFC is in the need of funds and hence it sold its receivables to MAC Financial Corporation (MFC) for ₹ 100 million. MFC created a trust for this purpose called General Investment Trust (GIT) through which it issued securities carrying a different level of risk and return to the investors. Further, this structure also permits the GIT to reinvest surplus funds for short term as per their requirement.

MFC also appointed a third party, Safeguard Pvt. Ltd. (SPL) to collect the payment due from obligor(s) and passes it to GIT. It will also follow up with defaulting obligor and if required initiate appropriate legal action against them.

From the information given above, choose the correct answer to the following questions:

5. The securitized instrument issued for ₹ 100 million by the GIT falls under category of …….

(a) Pass Through certificate (PTCs)

(b) Pay Through Security (PTS)

(c) Stripped Security

(d) Debt Fund.

6. In the above scenario, the Originator is……..

(a) Grow More Ltd.

(b) MAC Financial Corporation (MFC)

(c) General Investment Trust (GIT)

(d) Safeguard Pvt. Ltd.

7. In the above scenario, the General Investment Trust (GIT) is a/an……

(a) Obligor

(b) Originator

(c) Special Purpose Vehicle (SPV)

(d) Receiving and Paying Agent (RPA)

8. In the above scenario, the Safeguard Pvt. Ltd. (SPL) is a/an……

(a) Obligor

(b) Originator

(c) Special Purpose Vehicle (SPV)

(d) Receiving and Paying Agent (RPA)

9. Which of the following statement holds true?

(a) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to rise.

(b) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to fall.

(c) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities tend to fall.

(d) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities remain the same. **(5 x 2 = 10 Marks)**

Case Scenario III

Following information is related to actions taken in different situation of financial options:

Situation	Action	Exercise Price	Premium	Spot Price
I	Exercised	140	20	160
II	Exercised	200	15	175
III	Lapsed	300	25	400

From the information given above, choose the correct answer to the following questions:

10. In Situation III, the investor's position and the amount of profit / loss is.....
    (a) Put option, ₹ (25)
    (b) Call option, ₹ 75
    (c) Short position, ₹ 100
    (d) Long position, ₹ (100)
11. In Situation I, the investor's position and the amount of profit or loss is…….
    (a) Put option and ₹ 20
    (b) Call option and ₹ 0
    (c) Put option and ₹ 0
    (d) Call option and ₹ 20
12. In Situation II, the investor's position and the amount of profit / loss is……..
    (a) Put option and ₹ 10
    (b) Call option and ₹ 10
    (c) Put option and ₹ 25
    (d) Call option and ₹ 25 **(3 x 2 = 6 Marks)**

Case Scenario IV

A company is considering hedging its foreign exchange risk. It has made a purchase on 1st July, 2024 for which it has to make a payment of US$ 60,000 on December 31, 2024. The present exchange rate is 1 US $ = ₹ 83. It can purchase forward 1 $ at ₹ 82. The company will have to make an upfront premium @ 2% of the forward amount purchased. The cost of funds to the company is 12% per annum.

The company hedges its foreign exchange risk using above-mentioned forward contract.

From the information given above, choose the correct answer to the following questions:

13. If exchange rate on 31st December, 2024 happens to be ₹ 86 per US $ then due to forward position taken the company will make……
    (a) a loss of ₹ 1,04,304
    (b) a profit of ₹ 1,35,696
    (c) a loss of ₹ 2,24,304

(d) a profit of ₹ 2,55,696

14. If exchange rate on 31st December, 2024 happens to be ₹ 80 per US $ then due to forward position taken the company will make……

(a) a loss of ₹ 1,04,304

(b) a profit of ₹ 1,35,696

(c) a loss of ₹ 2,24,304

(d) a profit of ₹ 2,55,696

15. If exchange rate on 31st December, 2024 happens to be ₹ 88 per US $ then due to forward position taken the company will make……

(a) a loss of ₹ 1,04,304

(b) a profit of ₹ 1,35,696

(c) a loss of ₹ 2,24,304

(d) a profit of ₹ 2,55,696 **(3 x 2 = 6 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) On 20.10.2024, the balance in NOSTRO account with XYZ Bank in London was GBP 80000 and the balance in overbought was GBP 50000. During the day the following transactions have taken place.

Events	Amount (GBP)
DD Purchased	25,000
Purchased a bill on London	75,000
Sold forward TT	50,000
Forward purchased contract cancelled	25,000
Remitted by TT	42,500
Draft in London cancelled	20,000

What steps would you take, if you are required to maintain a credit balance of GBP 10,000 in the NOSTRO account and keep as overbought position on GBP 32,500? **(6 Marks)**

(b) Bank A enter into a Repo for 14 days with Bank B in 10% Government of India Bonds 2028 @ 5.65% for ₹ 8 crore. Assuming that clean price (the price that does not have accrued interest) be ₹ 99.42 and initial Margin be 2% and days of accrued interest be 262 days. You are required to determine:

(i) Dirty Price (Round off calculations upto two decimal points.)

(ii) Repayment at maturity. (Consider 360 days in a year and round off calculations to whole numbers.) **(4 Marks)**

(c) Explain the concept of Unicorn. **(4 Marks)**

2. (a) The closing value of a Stock Market Index for the month of October, 2007 is given below:

Date Closing	Index Value
1.10.07	2800
3.10.07	2780
4.10.07	2795
5.10.07	2830
8.10.07	2760
9.10.07	2790
10.10.07	2880
11.10.07	2960
12.10.07	2990
15.10.07	3200
16.10.07	3300
17.10.07	3450
19.10.07	3360
22.10.07	3290
23.10.07	3360
24.10.07	3340
25.10.07	3290
29.10.07	3240
30.10.07	3140
31.10.07	3260

You are required to test the weak form of efficient market hypothesis by applying the run test at 5% and 10% level of significance.

Following values can be used:

Value of t at 5% is 2.101 at 18 degrees of freedom.

Value of t at 10% is 1.734 at 18 degrees of freedom. **(10 Marks)**

(b) Explain the benefits of Securitization from the angle of originator. **(4 Marks)**

3. (a) XY Ltd., is interested in expanding its operation and planning to install a unit at US. For the proposed project, it requires a fund of $ 15 million (net of issue expenses/floatation cost). The estimated floatation cost is 3%. To finance the project it proposes to issue GDRs.

You as a financial consultant is required to compute the number of GDRs, to be issued and cost of the GDR with the help of following additional information.

(i) Expected market price of share at the time of issue of GDR is ₹ 350 (Face Value ₹ 100).

(ii) 3 shares shall underly each GDR and shall be priced at 6% discount to market price.

(iii) Expected Exchange Rate ₹ 84/$.

(iv) Dividend expected to be paid is 10% with growth rate of 8%. **(6 Marks)**

(b) ABC Ltd. has been maintaining a growth rate of 10 percent in dividends. The company has paid dividend @ ₹ 3 per share. The rate of return on market portfolio is 12 percent and the risk free rate of return in the market has been observed as 8 percent. The Beta co-efficient of company's share is 1.5.

You are required to calculate the expected rate of return on company's shares as per CAPM model and equilibrium price per share by dividend growth model.

(4 Marks)

(c) **Either**

Explain why applying the three most common globally accepted business valuation methods is challenging when valuing a startup. **(4 Marks)**

Or

Explain some similarities between Tokenization and Securitization. **(4 Marks)**

4. (a) Cyber Company is considering two mutually exclusive projects. Investment outlay of both the projects is ₹ 5,00,000 and each is expected to have a life of 5 years. Under three possible situations their annual cash flows and probabilities are as under:

		Cash Flow (₹)	
Situation	**Probabilities**	**Project A**	**Project B**
Good	0.3	6,00,000	5,00,000
Normal	0.4	4,00,000	4,00,000
Worse	0.3	2,00,000	3,00,000

The cost of capital is 7 per cent, which project should be accepted? Explain with workings. **(6 Marks)**

(b) An investor purchased 300 units of a Mutual Fund at ₹ 12.25 per unit on 31st December, 2019. As on 31st December, 2020 he has received ₹ 1.25 as dividend and ₹ 1.00 as capital gains distribution per unit.

Required:

(i) The return on the investment if the NAV as on 31st December, 2020 is ₹ 13.00.

(ii) The return on the investment as on 31st December, 2020 if all dividends and capital gains distributions are reinvested into additional units of the fund at ₹ 12.50 per unit. **(4 Marks)**

(c) Explain the benefits of International Financial Centre. **(4 Marks)**

5. (a) The total market value of the equity share of O.R.E. Company is ₹ 60,00,000 and the total value of the debt is ₹ 40,00,000. The treasurer estimate that the beta of the stock is currently 1.5 and that the expected risk premium on the market is 10 per cent. The treasury bill rate is 8 per cent.

Required:

(i) What is the beta of the Company's existing portfolio of assets?

(ii) Estimate the discount rate for an expansion of the company's present business if only equity is used to finance the expansion. **(8 Marks)**

(b) XY Ltd. is planning to expand its operations in view of growing demand for its products. For this purpose, it is considering to borrow an amount of ₹ 100 crores for a period of 3 months in the coming 6 months' time from now. The current rate

of interest is 8% per annum but due to inflation it may go up in 6 months' time. The company wants to hedge itself against the likely increase in interest rate.

The company's Bankers quoted an FRA (Forward Rate Agreement) at 8.20% per annum.

You are required to calculate due to FRA:

(i) The actual interest rate if the Banker pays to XY Ltd. an amount of ₹ 9,78,952.52

(ii) The actual interest rate if XY Ltd. will pay to the Banker a sum of ₹ 9,80,872.98

(6 Marks)

6. (a) Consider a portfolio consisting of a ₹ 200,00,000 investment in share XYZ and a ₹ 200,00,000 investment in share ABC. The daily standard deviation of both shares is 1% and that the coefficient of correlation between them is 0.3.

You are required to determine the 10-day 99% value at risk for the portfolio if 1% of a normal distribution lies more than 2.33 standard deviations below the mean.

(4 Marks)

(b) During the audit of the Weak Bank (W), RBI has suggested that the Bank should either merge with another bank or may close down. Strong Bank (S) has submitted a proposal of merger of Weak Bank with itself. The relevant information and Balance Sheets of both the companies are as under:

Particulars	Weak Bank (W)	Strong Bank (S)	Assigned Weights (%)
Gross NPA (%)	40	5	30
Capital Adequacy Ratio (CAR) Total Capital/ Risk Weight Asset	5	16	28
Market price per Share (MPS)	12	96	32
Book value			10
Trading on Stock Exchange	Irregular	Frequent	

Balance Sheet **(₹ in Lakhs)**

Particulars	Weak Bank (W)	Strong Bank (S)
Paid up Share Capital (₹ 10 per share)	150	500
Reserves & Surplus	80	5,500

Deposits	4,000	44,000
Other Liabilities	890	2,500
Total Liabilities	**5,120**	**52,500**
Cash in Hand & with RBI	400	2,500
Balance with Other Banks	-	2,000
Investments	1,100	19,000
Advances	3,500	27,000
Other Assets	70	2,000
Preliminary Expenses	50	-
Total Assets	**5,120**	**52,500**

You are required to

(a) Calculate Swap ratio based on the above weights:

(b) Ascertain the number of Shares to be issued to Weak Bank;

(c) Prepare Balance Sheet after merger; and

(d) Calculate CAR and Gross NPA of Strong Bank after merger. **(10 Marks)**

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FINAL COURSE: GROUP – I

PAPER – 2: ADVANCED FINANCIAL MANAGEMENT

ANSWER TO PART – I CASE SCENARIO BASED MCQS

1. **Option (a)**
2. **Option (b)**
3 **Option (a)**
4. **Option (c)**
5. **Option (b)**
6. **Option (b)**
7. **Option (c)**
8. **Option (d)**
9. **Option (b)**
10. **Option (a)**
11. **Option (b)**
12. **Option (a)**
13. **Option (b)**
14. **Option (c)**
15. **Option (d)**

ANSWERS OF PART – II DESCRIPTIVE QUESTIONS

1. (a) **Exchange Position:**

Particulars	Purchase GBP	Sale GBP
Opening Balance Overbought	50,000	—
DD Purchased	25,000	—
Purchased bill on London	75,000	—
Forward Sales – TT	—	50,000

Cancellation of Forward Contract	—	25,000
Remitted by TT	—	42,500
Draft on London cancelled	20,000	—
	1,70,000	1,17,500
Closing Balance Overbought	—	52,500
	1,70,000	1,70,000

Cash Position (Nostro A/c)

	Credit	Debit
Opening balance (credit)	80,000	—
Remitted by TT	—	42,500
	80,000	42,500
Closing balance (credit)	—	37,500
	80,000	80,000

The Bank has to sell spot TT GBP 27,500 to decrease the balance in Nostro account to GBP 10,000.

This would bring down the overbought position to GBP 25,000.

Since the bank requires an overbought position of GBP 32,500, it has to buy forward GBP 7,500. **(6 Marks)**

(b) **(i)** Dirty Price

= Clean Price + Interest Accrued

$$= 99.42 + 100 \times \frac{10}{100} \times \frac{262}{360} = 106.70$$

(ii) First Leg (Start Proceed)

$$= \text{Nominal Value x } \frac{\text{Dirty Price}}{100} \times \frac{100 - \text{Initial Margin}}{100}$$

$$= ₹\ 8,00,00,000 \text{ x } \frac{106.70}{100} \times \frac{100 - 2}{100} = ₹\ 8,36,52,800$$

Second Leg (Repayment at Maturity) = Start Proceed x $(1 + \text{Repo rate} \times \frac{\text{No. of days}}{360})$

$$= ₹\ 8,36,52,800 \times \left(1 + 0.0565 \times \frac{14}{360}\right) = ₹\ 8,38,36,604$$ **(4 Marks)**

(c) A Unicorn is a privately held start-up company which has achieved a valuation US$ 1 billion. This term was coined by venture capitalist Aileen Lee, first time in 2013. Unicorn, a mythical animal represents the statistical rarity of successful ventures.

A start-up is referred as a Unicorn if it has following features:

(i) A privately held start-up.

(ii) Valuation of start-up reaches US$ 1 Billion.

(iii) Emphasis is on the rarity of success of such start-up.

(iv) Other common features are new ideas, disruptive innovation, consumer focus, high on technology etc.

However, it is important to note that in case the valuation of any start-up slips below US$ 1 billion it can lose its status of 'Unicorn'. Hence a start-up may be Unicorn at one point of time and may not be at another point of time.

(4 Marks)

2. (a)

Date	Closing Index	Sign of Price Charge
1.10.07	2800	
3.10.07	2780	-
4.10.07	2795	+
5.10.07	2830	+
8.10.07	2760	-
9.10.07	2790	+
10.10.07	2880	+
11.10.07	2960	+
12.10.07	2990	+
15.10.07	3200	+
16.10.07	3300	+
17.10.07	3450	+
19.10.07	3360	-
22.10.07	3290	-

23.10.07	3360	+
24.10.07	3340	-
25.10.07	3290	-
29.10.07	3240	-
30.10.07	3140	-
31.10.07	3260	+

Total of sign of price changes (r) = 8

No of Positive changes = n_1 = 11

No. of Negative changes = n_2 = 8

$$\mu_r = \frac{2n_1n_2}{n_1+n_2}+1$$

$$\mu = \frac{2\times 11\times 8}{11+8}+1 = 176/19 + 1 = 10.26$$

$$\hat{\sigma}_r = \sqrt{\frac{2n_1n_2(2n_1n_2-n_1-n_2)}{(n_1+n_2)^2(n_1+n_2-1)}}$$

$$\hat{\sigma}_r = \sqrt{\frac{(2\times 11\times 8)(2\times 11\times 8-11-8)}{(11+8)^2(11+8-1)}} = \sqrt{\frac{176\times 157}{(19)^2(18)}} = \sqrt{4.252} = 2.06$$

Since too few runs in the case would indicate that the movement of prices is not random. We employ a two- tailed test the randomness of prices.

Test at 5% level of significance at 18 degrees of freedom using t- table

The lower limit

$= \mu - t \times \hat{\sigma}_r = 10.26 - 2.101 \times 2.06 = 5.932$

Upper limit

$= \mu + t \times \hat{\sigma}_r = 10.26 + 2.101 \times 2.06 = 14.588$

At 10% level of significance at 18 degrees of freedom

Lower limit

$= 10.26 - 1.734 \times 2.06 = 6.688$

Upper limit

= 10.26 + 1.734 × 2.06 = 13.832

As seen r lies between these limits. Hence, the market exhibits weak form of efficiency.

*For a sample of size n, the t distribution will have n-1 degrees of freedom.

(10 Marks)

(b) Originator (entity which sells assets collectively to Special Purpose Vehicle) achieves the following benefits from securitization.

(i) Off – Balance Sheet Financing: When loan/receivables are securitized it releases a portion of capital tied up in these assets resulting in off Balance Sheet financing leading to improved liquidity position which helps in expanding the business of the company.

(ii) More specialization in main business: By transferring the assets the entity could concentrate more on core business as servicing of loan is transferred to SPV. Further, in case of non-recourse arrangement even the burden of default is shifted.

(iii) Helps to improve financial ratios: Especially in case of Financial Institutions and Banks, it helps to manage Capital –To-Weighted Asset Ratio effectively.

(iv) Reduced borrowing Cost: Since securitized papers are rated due to credit enhancement and hence, they can be issued at reduced interest rate due to which the originator earns a spread, resulting in reduced cost of borrowings. **(4 Marks)**

3. (a) Net Issue Size = $15 million

Gross Issue = $\frac{\$15 \text{ Million}}{0.97}$ = $ 15.464 million

Issue Price per GDR in ₹ (350 x 3 x 94%)	₹ 987
Issue Price per GDR in $ (₹ 987/ ₹ 84)	$ 11.75
Dividend Per GDR (D_1) (₹ 10 x 3)	₹ 30
Net Proceeds Per GDR (₹ 987 x 0.97)	₹ 957.39

(i) Number of GDR to be issued $\frac{\$15.464 \text{ million}}{\$11.75}$ = 1.316085 million or 13,16,085

(ii) Cost of GDR to XY Ltd. $K_e = \frac{30.00}{957.39} + 0.08 = 11.13\%$

(6 Marks)

(b) CAPM formula for calculation of Expected Rate of Return is :

$ER = R_f + \beta (R_m - R_f)$

$= 8\% + 1.5 (12\% - 8\%)$

$= 8\% + 1.5 (4\%)$

$= 8\% + 6\%$

$=14\%$ or 0.14

Applying Dividend Growth Model for the calculation of per share equilibrium price:

$ER = \frac{D_1}{P_0} + g$

$0.14 = \frac{3 (1.10)}{P_0} + 0.10$

$0.14 - 0.10 = \frac{3.30}{P_0}$

$0.04\ P_0 = 3.30$

$P_0 = \frac{3.30}{0.04} = ₹\ 82.50$

Per share equilibrium price will be ₹ 82.50. **(4 marks)**

(c) One common feature in the three most common globally accepted methods of valuing a business is that it pre-supposes a business that is established and generates cash flows using its assets.

On the contrary it is difficult to call Start-ups "established" in any sense or assume that their cash flows (if not already spent on marketing) will remain constant. Profitability seems to be a cursed word in the startup investor circles.

Like the valuation of startups is often required for bringing in investments either by equity or debt. However, the most significant differentiating factor in the valuation of a startup is that there is no historical data available based on which future projections can be drawn.

The value rests entirely on its future growth potential, which, in many cases, is based on an untested idea and may not have been based on an adequate sampling of consumer behaviour or anticipated consumer behaviour. The estimates of future growth are also often based upon assessments of the competence, drive, and self-belief of, at times, very highly qualified and intelligent managers and their capacity to convert a promising idea into commercial success.

The major roadblock with startup valuation is the absence of past performance indicators. There is no 'past' track record, only a future whose narrative is controlled based on the founders' skill. It can be equated as founders walking in the dark and making the investors believe that they are wearing night vision goggles. While this is exciting and fun for the founders, this is risky for the investors. **(4 Marks)**

OR

Following are some similarities between Tokenization and Securitization:

(i) **Liquidity**: - First and foremost both Securitization and Tokenization inject liquidity in the market for the assets which are otherwise illiquid assets.

(ii) **Diversification**: - Both help investors to diversify their portfolio thus managing risk and optimizing returns.

(iii) **Trading**: - Both are tradable hence helps to generate wealth.

(iv) **New Opportunities**: - Both provide opportunities for financial institutions and related agencies to earn income through collection of fees.

(4 Marks)

4. (a) Project A

Expected Net Cash flow (ENCF)

0.3 (6,00,000) + 0.4 (4,00,000) + 0.3 (2,00,000) = 4,00,000

σ^2=0.3 (6,00,000– 4,00,000)^2 + 0.4 (4,00,000 – 4,00,000)^2 + 0.3 (2,00,000 – 4,00,000)^2

$\sigma = \sqrt{24,00,00,00,000}$

σ = 1,54,919.33

Present Value of Expected Cash Inflows = 4,00,000 × 4.100 = 16,40,000

NPV = 16,40,000 – 5,00,000 = 11,40,000

Project B

ENCF = 0.3 (5,00,000) + 0.4 (4,00,000) + 0.3 (3,00,000) = 4,00,000

σ^2=0.3 (5,00,000 – 4,00,000)^2 + 0.4 (4,00,000 – 4,00,000)^2 + 0.3 (3,00,000 – 4,00,000)^2

$\sigma = \sqrt{6,00,00,00,000}$

σ = 77,459.66

Present Value of Expected Cash Inflows = 4,00,000 × 4.100 = 16,40,000

NPV = 16,40,000 – 5,00,000 = 11,40,000

Recommendation: NPV in both projects being the same, the project should be decided on the basis of standard deviation and hence project 'B' should be accepted having lower standard deviation, means less risky. **(6 Marks)**

(b) Return for the year (all changes on a per year basis)

Particulars	**₹ /Unit**
Change in price (₹ 13.00 – ₹ 12.25)	0.75
Dividend received	1.25
Capital gain distribution	1.00
Total Return	3.00

Return on investment = $\frac{3.00}{12.25} \times 100$ = 24.49%

Alternatively, it can also be computed as follows:

$$\frac{(NAV_1 - NAV_0) + D_1 + CG_1}{NAV_0} X 100$$

$$= \frac{(13 - 12.25) + 1.25 + 1.00}{12.25} X 100$$

= 24.49%

If all dividends and capital gain are reinvested into additional units at ₹ 12.50 per unit the position would be.

Total amount reinvested = ₹ 2.25 × 300 = ₹ 675

Additional units added = $\frac{₹\ 675}{12.50}$ = 54 units

Value of 354 units as on 31-12-2020 = ₹ 4,602

Amount paid for 300 units on 31-12-2019 (300 × ₹ 12.25) = ₹ 3,675

Return = $\frac{₹\ 4,602 - ₹\ 3,675}{₹\ 3,675} = \frac{₹\ 927}{₹\ 3,675}$ = 25.22% **(4 Marks)**

(c) There are numberless direct and indirect benefits of setting up IFC but some major benefits emanating from establishing IFC are as follows:

(i) Opportunity for qualified professionals working outside India come here and practice their profession.

(ii) A platform for qualified and talented professionals to pursue global opportunities without leaving their homeland.

(iii) Stops Brain Drain from India.

(iv) Bringing back those financial services transactions presently carried out abroad by overseas financial institutions/entities or branches or subsidiaries of Indian Financial Market.

(v) Trading of complicated financial derivative can be started from India.

(4 Marks)

5. (a) (i) $\beta_{asset} = \beta_{equity} \times \frac{V_E}{V_0} + B_{debt} \times \frac{V_D}{V_0}$

Note: Since β_{debt} is not given it is assumed that company debt capital is virtually riskless.

If company's debt capital is riskless than above relationship become:

Here β_{equity} = 1.5; $\beta_{asset} = \beta_{equity} \frac{V_E}{V_0}$

As β_{debt} = 0

V_E = ₹ 60 lakhs.

V_D = ₹ 40 lakhs.

V_0 = ₹ 100 lakhs.

$\beta_{asset} = 1.5 \times \frac{60 \text{ lakhs}}{100 \text{ lakhs}}$

= 0.9

(ii) If only equity is used to finance the expansion, the Cost of Capital for discounting company's expansion of existing business shall be computed as follows:

Company's cost of equity = Rf + $\beta A \times$ Market Risk premium

Where Rf = Risk free rate of return

βA = Beta of company assets

Therefore, company's cost of equity = 8% + 0.9 $\times$ 10% = 17% and overall cost of capital i.e. discounting rate for an expansion of company's present business shall also be 17%. **(8 Marks)**

(b) Final settlement amount shall be computed by using formula:

$$= \frac{(N)(RR - FR)(dtm/DY)}{[1 + RR(dtm/DY)]}$$

Where,

N = the notional principal amount of the agreement;

RR = Actual Reference Rate for the maturity specified by the contract prevailing on the contract settlement date;

FR = Agreed-upon Forward Rate; and

dtm = maturity period in days or months of the forward rate agreement

DY = Total number of days or month in a year as per convention

Accordingly,

i. If Banker pays to XY Ltd. an amount of ₹ 9,78,952.52 then actual interest shall be computed as follows:

$$₹\ 9,78,952.52 = \frac{(₹\ 100\ crore)(RR - 0.082)(3/12)}{[1 + RR(3/12)]}$$

RR = 0.086

Thus, the actual interest rate happens to be 8.60% on the settlement date.

ii. If XY Ltd. pays to Banker an amount of ₹ 9,80,872.98 then actual interest shall be computed as follows:

$$— ₹\ 9,80,872.98 = \frac{(₹\ 100crore)(RR - 0.082)(3/12)}{[1 + RR(3/12)]}$$

RR = 0.078

Thus, the actual interest rate happens to be 7.80% on the settlement date.

(6 Marks)

6. (a) The standard deviation of the daily change in the investment in each asset is ₹ 2,00,000 i.e. 2 lakhs. The variance of the portfolio's daily change is

$V = 2^2 + 2^2 + 2 \times 0.3 \times 2 \times 2 = 10.4$

σ (Standard Deviation) = $\sqrt{10.4}$ = ₹ 3.22 lakhs

Alternatively, it can also be computed as follows:

$= (1)^2(0.50)^2 + (1)^2(0.50)^2 + 2(1)(1)(0.3)(0.50)(0.50)$

$= 0.25 + 0.25 + 0.15 = 0.65\%$

σ (Standard Deviation) = $\sqrt{0.65} = 0.80623\%$

σ (Standard Deviation) in Amount = ₹ 400 lakhs x 0.80623% = ₹ 3.22 lakhs

Accordingly, the standard deviation of the 10-day change is

₹ 3.22 lakhs x $\sqrt{10}$ = ₹ 10.18 lakh

Since 1% of a normal distribution lies more than 2.33 standard deviations below the mean. The 10-day 99 percent value at risk is therefore

2.33 × ₹ 10.18 lakh = ₹ 23.72 lakh **(4 Marks)**

(b) (a) **Calculation of Book Value Per Share**

Particulars	**Weak Bank (W)**	**Strong Bank (S)**
Share Capital (₹ Lakhs)	150	500
Reserves & Surplus (₹ Lakhs)	80	5,500
	230	6,000
Less: Preliminary Expenses (₹ Lakhs)	50	--
Net Worth or Book Value (₹ Lakhs)	180	6,000
No. of Outstanding Shares (Lakhs)	15	50
Book Value Per Share (₹)	12	120

Swap Ratio

Gross NPA	5:40	5/40 x 30%	0.0375
CAR	5:16	5/16 x 28%	0.0875

Market Price	12:96	12/96 x 32%	0.0400
Book Value Per Share	12:120	12/120x 10%	0.0100
			0.1750

Thus, for every share of Weak Bank, 0.1750 share of Strong Bank shall be issued.

(b) **No. of equity shares to be issued:**

$\frac{150}{10} \times 0.1750 = 2.625$ lakh shares

(c) **Balance Sheet after Merger**

Calculation of Capital Reserve

Book Value of Shares	₹ 180.00 lac
Less: Value of Shares issued	₹ 26.25 lac
Capital Reserve	₹ 153.75 lac

Balance Sheet

	₹ lac		₹ lac
Paid up Share Capital	526.25	Cash in Hand & RBI	2900.00
Reserves & Surplus	5500.00	Balance with other banks	2000.00
Capital Reserve	153.75	Investment	20100.00
Deposits	48000.00	Advances	30500.00
Other Liabilities	3390.00	Other Assets	2070.00
	57570.00		**57570.00**

(d) Calculation CAR & Gross NPA % of Bank 'S' after merger

$$\text{CAR / CRWAR} = \frac{\text{Total Capital}}{\text{Risky Weighted Assets}}$$

	Weak Bank	Strong Bank	Merged
Capital Adequacy Ratio (CAR)	5%	16%	
Total Capital	₹ 180 lac	₹ 6000 lac	₹ 6180 lac
Risky Weighted Assets	₹ 3600 lac	₹ 37500 lac	₹ 41100 lac

$$CAR = \frac{6180}{41100} \times 100 = 15.04\%$$

$$GNPA\ Ratio = \frac{Gross\ NPA}{Gross\ Advances} \times 100$$

	Weak Bank	Strong Bank	Merged
GNPA (Given)	0.40	0.05	
	$0.40 = \frac{GNPA_R}{₹\ 3500\ lac}$	$0.05 = \frac{GNPA_S}{₹\ 27000\ lac}$	
Gross NPA	₹ 1400 lac	₹ 1350 lac	₹ 2750 lac

(10 Marks)