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PEM1
PART - I

Case Scenario-I :

P Ltd. is considering a new project with the following details :

Initial project cost ₹ 4,80,000

Annual projected sales ₹ 4,00,000

Annual projected variable cost ₹ 1,60,000

Annual projected fixed cost ₹ 60,000

Project life 4 years

Cost of capital 10% p.a.

Consider Cumm. PVF for 4 years @ 10% = 3.169 and @ 11% = 3.103

Note : (a) Ignore depreciation on initial project cost and taxation.

(b) Calculation up to 2 decimal places.

From the information given above, choose the correct answer to the following question No. 1 to 3 :

1. If initial project cost is varied adversely by 10%, what is the percentage change in NPV ?

(A) 42.42%

(B) 52.80%

(C) 53.09%

(D) 63.09%

(4)

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2. If annual cash inflow is varied adversely by 10%, what is the percentage change in NPV ?

(A) 33.38%

(B) 53.09%

(C) 63.09%

(D) 52.80%

3. If cost of capital is varied adversely by 10%, what is the percentage change in NPV ?

(A) 11.00%

(B) 12.10%

(C) 13.14%

(D) 14.45%

Case Scenario-II :

Fair Return Mutual Fund made an issue of 5,00,000 units @ ₹ 10 each on 1st April 2024. No entry load was charged. The fund made the following investments :

Particulars	(₹)
25,000 Equity Shares of ₹ 100 each @ ₹ 160	40,00,000
7% Government Securities (At Par)	4,00,000
9% Debentures (Unlisted) (At Par)	2,50,000
10% Debentures (Listed) (At Par)	2,50,000
	49,00,000

Handwritten notes: 175, 225000, 1 lac



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During the year dividend of ₹ 6,00,000 were received on equity shares. Interest on all types of debt securities was received as and when due. Operating expenses paid during the year amounted to ₹ 2,50,000.

At the end of the year equity shares and 10% debentures are quoted at 175% and 90% respectively of the face value. Other investments are valued at par.

From the information given above, choose the correct answer to the following question No. 4 to 6 :

4. What is net cash balance of the Mutual Fund at the end of the year ?

(A) ₹ 1,00,000

(B) ₹ 7,00,000

(C) ₹ 7,75,500

(D) ₹ 5,25,500

$$\begin{array}{r} + 1 \text{ la} \\ + 6 \text{ la} \\ - 2.5 \text{ la} \\ + .28 \\ + .225 \\ + .25 \\ \hline 5.25500 \end{array}$$

5. What is Total Net Assets Value (NAV) of the Mutual Fund at the end of the year ?

(A) ₹ 52,50,000

(B) ₹ 50,25,000

(C) ₹ 57,75,500

(D) ₹ 49,00,500

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6. If the Mutual Fund distributes a dividend of ₹ 0.60 per unit during the year to the unit holders, the NAV per unit at the end of the year will be

(A) ₹ 11.551

(B) ₹ 10.951

(C) ₹ 10.051

(D) ₹ 12.751

5475500
545

Case Scenario-III :

HHM & Co., is a famous consultant. It has established the following strategy on the stock of PLS Ltd :

(a) Purchased one 3-month call option with a premium of ₹ 25 and an exercise price of ₹ 750.

(b) Purchased one 3-month put option with a premium of ₹ 8 and an exercise price of ₹ 600.

The stock of PLS Ltd is currently selling at ₹ 680. The option size is 100 shares of PLS Ltd.

-25 × 100 - 8 × 100

= -3300



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From the information given above, choose the correct answer to the following question No. 7 to 9 :

7. What is the Net gain or loss, if the price of the stock remains at ₹ 680 after 3 months ?

(A) Net loss of ₹ 3,300

(B) Net gain of ₹ 3,300

(C) Net gain of ₹ 6,700

(D) Net loss of ₹ 6,700

call
Put
25
750
600
100
500
25 + 8
21

8. What is the Net gain or loss, if the price of the stock falls to ₹ 500 after 3 months ?

(A) Net loss of ₹ 3,300

(B) Net gain of ₹ 3,300

(C) Net gain of ₹ 6,700

(D) Net loss of ₹ 6,700

25 + 8 = 33
gain 100

9. What is the Net gain or loss, if the price of the stock rises to ₹ 820 ?

(A) Net loss of ₹ 3,700

(B) Net gain of ₹ 3,700

(C) Net gain of ₹ 10,300

(D) Net loss of ₹ 10,300

820
750
70 + 100
- 3300
3700

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PEM1

Case Scenario-IV :

On 3rd April, 2025, Royal Bank quotes the following :

	Bid	Ask
Spot Exchange Rate (US \$ 1)	₹ 84.2525	₹ 85.5945
2 months' swap points	60	80
3 months' swap points	150	178

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

Assume spot date as 5th April, 2025 and 1 swap point = 0.0001.

Calculation up to 4 decimal places.

From the information given above, choose the correct answer to the following question No. 10 to 12 :

10. The swap points for 2 months & 15 days (i.e., for 20th June, 2025) will be

(A) Bid - 90 and Ask - 98

(B) Bid - 105 and Ask - 129

(C) Bid - 98 and Ask - 90

(D) Bid - 129 and Ask - 105

11. Foreign exchange rate for 20th June, 2025 will be

(A) Bid - ₹ 85.2525 and Ask - ₹ 84.5945

(B) Bid - ₹ 84.5945 and Ask - ₹ 85.2525

(C) Bid - ₹ 84.2630 and Ask - ₹ 85.6074

(D) Bid - ₹ 85.6074 and Ask - ₹ 84.2630

12. On an average rate, the annual rate of premium/discount of US \$ on Indian ₹ will be

(A) Bid - 0.0498 % and Ask - 0.0524 % (Premium)

(B) Bid - 0.0598 % and Ask - 0.0723 % (Discount)

(C) Bid - 0.0723 % and Ask - 0.0598 % (Premium)

(D) Bid - 0.0598 % and Ask - 0.0723 % (Premium)

Case Scenario-V :

ABC Ltd. is planning to acquire XYZ Ltd. The following information is available in this respect :

Company	No. of Shares	Market Price Per Share (₹)	P/E Ratio
ABC Ltd.	12,00,000	16	20 times
XYZ Ltd.	4,00,000	20	10 times

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$$PE = \frac{MP}{EPS}$$

$$EPS = \frac{MP}{PE}$$

$$0.8 = \frac{16}{PE}$$

$$PE = \frac{16}{0.8} = 20$$

$$17.6 = \frac{16}{PE}$$

$$PE = \frac{16}{17.6} = 0.909$$

PAT

(10)

PEM1

$$\frac{8012}{16} = 500.75$$

ABC Ltd. plans to acquire the whole of XYZ Ltd. by issuing shares at its market price of ₹ 16. It is expected that the price of ABC Ltd. share will remain constant after this acquisition. Purchase Consideration is ₹ 80,00,000.

Calculation up to 2 decimal places.

From the information given above, choose the correct answer to the following question No. 13 to 15 :

13. EPS of ABC Ltd. & XYZ Ltd. before acquisition are respectively

2

(A) ₹ 0.8 & ₹ 2.0

(B) ₹ 2.0 & ₹ 0.8

(C) ₹ 0.8 & ₹ 1.04

(D) ₹ 1.04 & ₹ 0.8

$$\begin{array}{r} \text{Pre-PAT} \\ \hline \text{Post S.C} \end{array} \quad \begin{array}{r} 17.6 \\ \hline 17 \end{array}$$

14. EPS of ABC Ltd. after acquisition is

2

(A) ₹ 0.84

(B) ₹ 0.96

(C) ₹ 1.04

(D) ₹ 1.14



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$$\frac{P}{EPS} = \frac{16}{1.04}$$

15. P/E Ratio of ABC Ltd. after acquisition is

(A) 20 times

(B) 15.38 times

(C) 10 times

(D) 14.55 times

	ABC	X Y Z
No. of shares	1200,000	400,000
MPS	18	20
PE	20	10
EPS	0.8	2

$$PC = \frac{80,00,000}{16} = 500,000$$

$$PF = \frac{MX}{EPK} = \frac{16}{1.04}$$

$$PF = \frac{MX}{EPK} = \frac{PE \cdot MPS}{EPK}$$

$$\frac{1760,000}{1700,000}$$



Roll No.

Total No. of Questions – 6

Total No. of Printed Pages – 12

Maximum Marks – 70

GENERAL INSTRUCTIONS TO CANDIDATES

1. The question paper comprises two parts, Part I and Part II.
2. Part I comprises Multiple Choice Questions (MCQs).
3. Part II comprises questions which require descriptive answers.
4. Ensure that you receive the question paper relating to both the parts. If you have not received both, bring it to the notice of the invigilator.
5. Answers to MCQs in Part I are to be marked on the OMR answer sheet as given on the cover page of descriptive answer book only. Answers to questions in Part II are to be written in the same descriptive answer book. Answers to MCQs, if written inside the descriptive answer book will not be evaluated.
6. OMR answer sheet given on the cover page of descriptive answer book will be in English only for all candidates, including for Hindi medium candidates.
7. **The bar coded sticker provided in the attendance register, is to be affixed only on the descriptive answer book.**
8. You will be allowed to leave the examination hall only after the conclusion of the exam. If you have completed the paper before time, remain in your seat till the conclusion of the exam.
9. Duration of the examination is 3 hours. You will be required to submit the descriptive answer books with OMR cover page to the invigilator before leaving the exam hall, after the conclusion of the exam.
10. The invigilator will give you acknowledgement on Page 2 of the admit card, upon receipt of the descriptive answer book.
11. Candidate found copying or receiving or giving any help or defying instructions of the invigilators or having / using mobile phone or smart watch or any other electronic gadget will be expelled from the examination and will also be liable for further punitive action.

PART – II

70 Marks

1. Question paper comprises 6 questions. Answer Question No. 1 which is compulsory and any 4 out of the remaining 5 questions.
2. Working notes should form part of the answer.
3. Answers to the questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be evaluated.

PART - II

1. (a) PN Limited submits the following details for the financial year ended on 31st March 2025 :

6

Number of Equity Shares	1,50,000
Current market price per share	₹ 12
10% Debts	₹ 2,00,000
Cash and Cash Equivalents	₹ 5,00,000
Gross Profit	₹ 12,00,000
Indirect Expenses (Excluding Depreciation & Interest)	₹ 5,00,000
Depreciation	₹ 30,000
Risk-free rate of return	7%
Market rate of return	16%
Beta of the Company	0.8
Applicable Tax Rate	20%

Solution: 1(a)

G.P. 12 lag ✓
loss open/ 5 lag ✓
ind. Exp

EBITDA 7 lag ✓
Dep 30k ✓

EBIT 6.7 lag
Int. 20k

PBT 6.5 lag
tax @ 20% 1.3 lag

PAT 5.2 lag
S.M. 1.5 $\Rightarrow EPS = 5.2 / 1.5 = ₹ 3.47 / \text{share}$

- ① M.cap C.M.P. $\times$ Shng = $12 \times 1.5 \text{ lag} = 18 \text{ lag.}$
- ② cash - 5 lag.
- ③ Debt + 2 lag.

Ev. ① + ③ - ② $\Rightarrow 15 \text{ lag.}$



$$\begin{aligned} \textcircled{1} \text{ CAPM: } K_e &= R_f + \beta \text{CMRP} \\ &= 7\% + 0.8(16\% - 7\%) \\ &= 14.2\% \end{aligned}$$

$$\textcircled{2} \quad 3.47$$

$$\textcircled{3} \quad EV = EBITDA \times 4 = 7 \text{ lag} \times 4 = 28 \text{ lag}$$

$$\begin{aligned} \textcircled{4} \quad E_q &= \frac{EV - \text{Debt} + \text{cash}}{1} \\ &= \frac{28 - 2 + 5}{1} = 31 \text{ lag} \end{aligned}$$

$$\textcircled{5} \quad EV \text{ based on Mcap} = 15 \text{ lag}$$

$$\& \text{ EV on 4x EBITDA} = 28$$

EV based on EBITDA return



(3)

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On the basis of above details, you are required to calculate the following :

- (i) Cost of Equity of the company using CAPM.
- (ii) Earnings Per Share (EPS) of the company.
- (iii) Equity Value of the company if applicable EBIDTA multiple is 4.
- (iv) Enterprise Value of the company.

Calculation up to 2 decimal points.

- (b) KK Ltd. operating in Japan has today affected sales to an Indian company LM Limited, the payment being due in 3 months from the date of invoice. The invoice amount is 855 lakh yen which at today's spot rate is equivalent to ₹ 500 lakh. Looking to the present market conditions, it is anticipated that the exchange rate will decline by 10% over the 3 months period. In order to protect the yen payments, the importer proposes to take appropriate action in the foreign exchange market. The 3 months forward rate is presently quoted as 1.68 yen per rupee.

You are required to

- (i) Calculate the Expected Gain/(Loss) under present situation.
- (ii) Calculate the Expected Gain/(Loss) if hedged by forward contract.
- (iii) Recommend which option from above (i) and (ii) will best for the company.

Calculation up to 3 decimal points.

- (c) List the steps involved in Business Succession Strategy.

PEM2

P.T.O.

1(b) KIC Japan $\rightarrow$ Export to India

$$855 \text{ lacs Yen} = \text{Rs. } 500 \text{ lacs.}$$

$$\text{INR} = \frac{855 \text{ Yen}}{500}$$

$$\text{INR} = 1.71 \text{ Yen}$$

Each rate ~~decre~~ by 10% Over 30 months

1

$$\text{3M +w INR} = 1.68 \%$$

for importers if ^{have} currency depreciation. it is a loss.

payment in Yen. $855 \text{ lacs} \odot$
 $= \text{Rs. } 500 \text{ lacs.}$ Spot = 1.71

no hedge. $855 \text{ lacs yen} \odot (1.71 - 10\%)$
 $= 1.539$

$$= \text{Rs. } 555.55 \text{ lacs}$$

loss for importer $55 - 555 \text{ lacs}$



Fwd rate 855 lacs per @ 1.68 %/INR

$$855 \times \frac{1.68}{100} = 14.154 \text{ lacs approx.}$$

$$\text{Loss} = 8.929 \text{ lacs INR}$$

Option B is better



2. (a) Mr. X is holding 2,000 shares of PQR Ltd. Presently, dividend being paid by the company is ₹ 2.50 per share and the share is being sold at ₹ 45 per share in the market. Mr. X is concerned about several factors which are likely to be changed during the course of the year as indicated below :

Particulars	Existing	Revised
Risk-free rate of return	10%	8%
Market risk premium	6%	4%
Beta value	1.30	1.20
Expected growth rate	4%	6%

In view of the above changing factors, ADVISE whether Mr. X should buy, hold or sell the shares.

Calculation up to 2 decimal points.

- (b) BM & Co. is considering to borrow an amount of ₹ 80 crore for a period of 3 months in the coming 6 months time from now. The current rate of interest is 7% per annum but 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 7.30 % per annum.

0 — 6 — +3 — 9

2 (a)

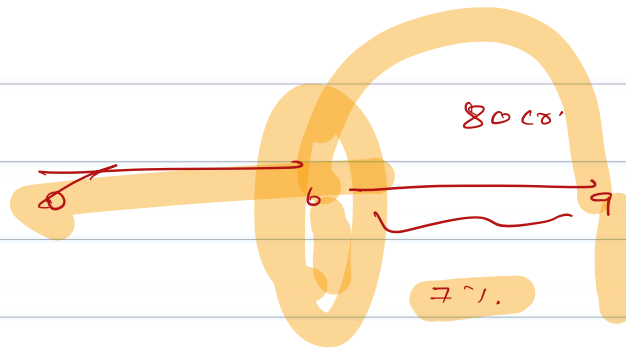
$$D_0 = 2.5 \quad P_0 = 45 \quad \text{Shares held } 2000$$

	Current	Rev.
R_f	10%	8%
MRF	6%	4%
β	1.3	1.2
$k_e =$	$10 + 6\% (1.3)$	$8 + 4\%$
$=$	17.8	12.8
$g =$	4%	6%
$P_0 =$	$D_1 / (k_e - g)$	
$=$	$\frac{2.5 \times (1.04)}{17.8 - 4}$	$\frac{2.5 \times 1.06}{12.8 - 6\%}$
$=$	18.84	38.97

Under both scenarios Overpriced - Sell



2(b).



FRA: 7.3%

Settlement rate:

7.6%

6.8%

Settlement at:

$$3 \times \frac{(7.6\% - 7.3\%) \times 8000}{12}$$

$$3 \times \frac{(6.8\% - 7.3\%) \times 8000}{12}$$

600000

10 yrs.

receipt

payment

PV:

600000

10 yrs

$$\left(1 + \frac{7.6\% \times 3}{12}\right)$$

$$\left(1 + \frac{6.8\% \times 3}{12}\right)$$

=

588812.56

983284.17



(5)

PEM2

You are required to –

Compute the final settlement amount if the actual rate of interest during consideration period happens to be (i) 7.60% p.a. and (ii) 6.80% p.a.

(Show your workings on the basis of months)

Calculation up to 4 decimal place.

(c) Identify the key points that make an organization financially sustainable.

4

3. (a) TK Ltd. has ₹ 600 Lakh 12% Debenture outstanding with 5 years remaining to redemption. Since interest rates are decreasing, company is planning to redeem these debentures with a ₹ 600 Lakh issue of 5 years 10% Debenture at par. Issue cost of 10% Debenture will be ₹ 10 Lakh. Premium paid on redemption of 12% Debenture is 5%. Tax rate applicable to company is 20%.

6

You are required to advise on the 12% Debenture Redemption Decision.

PVF @ 10% & 8% are as under –

Rate	1	2	3	4	5
8%	0.93	0.86	0.79	0.74	0.68
10%	0.91	0.83	0.75	0.68	0.62

Calculation up to 2 decimal points.

PEM2

P.T.O.

3(a)

Deb Rs. 600 lacs 12% bal rat sys. 72

Refin: 600 lacs 10% 5 yr Deb at 10% 60

12

Costs:

issu 10 lacs

prem: 30 lacs (600 lacs x 5%) / 40 lacs

fin rate 20%

PRF @ 10% wss 20% for = 8%

	cf	fin buyt	net cf	PRF @ 8%	
0	-40 lacs	20%	-32 lacs	1	-32
1	12 lacs	20%	9.6 lacs	0.93	8.93
2	12	20%	9.6 lacs	0.86	8.26
3	12	20%	9.6 lacs	0.79	7.58
4	12	20%	9.6 lacs	0.74	7.10
5	12	20%	9.6 lacs	0.68	6.53

6.40



int on Old Deb @ 12% on 600 lacs = 72 lacs
 new deb @ 10% on 600 lacs = 60 lacs
saving 12 lacs

your definition:

if for benefit on red part & issue Exp.
 on day 0 if part is added as for Exp.
 But issue Exp amortised over Working

	CF	tax	net	iss & amort. Exp.	net	P.V.F	
0	-30	20%	-24			@ 8%	
0	-10	0	-10		-34	1	-34
1	12	20%	9.6	2x20% 0.4	10	0.93	9.3
2	12	20%	9.6	0.4	10	0.86	8.6
3	12	20%	9.6	0.4	10	0.79	7.9
4	12	20%	9.6	0.4	10	0.74	7.4
5	12	20%	9.6	0.4	10	0.68	6.8
							<u>6</u>

then also are gained.



(6)

PEM2

(b) Mr. DK has 1,000 units of AM Mutual Fund. NAV of it is ₹ 17.50 per unit and ₹ 18.90 per unit at the beginning and at the end of the year respectively. The Mutual Fund has given two options:

Option I: Pay ₹ 1.50 per unit as dividend and ₹ 1.20 per unit as a capital gain, or

Option II: Reinvest these distributions at an average NAV of ₹ 17.30 per unit.

You are required to compute the holding period return percentage for both the options and select which option is preferable.

Calculation up to 2 decimal points.

(c) State the risks associated with the use of Blockchain Technology.

4. (a) The following details are given for TC Limited and PC Limited stocks and Nifty Index for a period of one year:

	TC Limited	PC Limited	Nifty Index
Average return	0.12	0.18	0.6
Variance of return	5.8	4.8	2.10
Beta (β)	0.8	0.7	
Proportion of allocated fund	50%	50%	

PEM2

$$3c b) \quad NAV_0 = 17.5$$

$$NAV_1 = 18.90$$

①

$$\begin{array}{r} \text{Div } 1.5 \\ \text{Cm } 1.2 \\ \hline 2.7 \end{array}$$

②

~~2.7~~
Not included
in 18.90

2.7

$$\text{Ret} = \frac{18.9 + 2.2 - 17.5}{17.5}$$

$$= \frac{3.6}{17.5} = 20.57\%$$

$$\frac{2.7 \times 1000}{17.3}$$

∴ New
units
156.0694

total units 1156.0694

$$NAV = 18.90$$

$$\text{Ch val} = 21849.71$$

$$\text{Op NAV} = 17500$$

$$\text{HPE} = 21849.71 - 17500$$

$$= 4349.71$$

Option 2 profitable



u(a)

Systematic & unsystematic risk

$$\text{Total risk} = \text{Sys risk} + \text{unsys risk}$$

$$\sigma^2 = \beta^2 \sigma_m^2 + \text{unsys risk}$$

	Tc	Pc
(5) σ^2	5.8	4.8
σ_m^2	2.1	2.1
β	0.8	0.7
$\beta^2 \sigma_m^2$	0.64×2.1	0.49×2.1
(4) Sys risk	1.344	1.029
unsys risk	4.456	3.771
(3) - (4)	1.15	1.04
	2.11	1.94

Part 2

Portfolio risk

$$\sigma_p^2 = (\sigma_1 w_1)^2 + (\sigma_2 w_2)^2 + 2\sigma_1 \sigma_2 w_1 w_2 \rho$$

$$\sigma \times \sigma_1 \sigma_2 = \text{Covars}$$



covar of 2 funds

$$= \beta_1 \beta_2 \sigma_m^2$$

$$= 0.8 \times 0.7 \times 2.1$$

$$= 1.176$$

$$\sigma_p^2 = 0.5^2 \times 5.8 + 0.5^2 \times 4.8 + 2 \times 0.5 \times 0.5 \times 1.176$$

$$= 3.238$$

$$\sigma = \sqrt{3.238} = 1.8$$

(3)

ratio 60:40

then portfolio risk

$$0.6^2 \times 5.8 + 0.4^2 \times 4.8$$

$$+ 2 \times 0.6 \times 0.4 \times 1.176$$

$$= 3.444$$

50:50

Return

15%

risk

$$3.238$$

60:40

14.4

$$3.42048$$

$$\sqrt{1.856}$$

$$12 \times 60 \rightarrow 7.2$$

$$18 \times 40 \rightarrow 7.2$$

no not port as risk inc. with lower return



$$\sigma_p^2 = \left(\sum x_i \beta_i \right)^2 \sigma_m^2 + \sum x_i^2 \sigma_e^2$$

$$\begin{aligned} \textcircled{Q} 50:50 &= \left(0.5 \times .8 + 0.5 \times 0.7 \right)^2 \times 2.1 \\ &+ \left[(0.5)^2 \times 4.456 \right. \\ &\quad \left. + (0.5)^2 \times 3.771 \right] \end{aligned}$$

$$= 3.238$$

$$\begin{aligned} \textcircled{Q} 60:40 &= \left(0.6 \times .8 + 0.4 \times 0.7 \right)^2 \times 2.1 \\ &+ \left[(0.6)^2 \times 4.456 \right. \\ &\quad \left. + (0.4)^2 \times 3.771 \right] \end{aligned}$$

$$= 3.42048$$



(7)

PEM2

You are required to

- (i) Calculate the systematic and unsystematic risk for the companies' stocks.
- (ii) Calculate portfolio risk.
- (iii) If the proportion of fund allocation is changed to 60:40 for TC Limited and PC Limited respectively, Advise whether it is preferable or not.

Calculation up to 3 decimal points.

- (b) Mr. SK buys 5,000 shares of P Ltd. @ ₹ 50 per share whose beta value is 1.5 and sells 2,500 shares of Q Ltd. @ ₹ 80 per share having a beta value of 2. He obtains a complete hedge by Nifty Futures at ₹ 1,000 each.

He closes out his position at the closing price of the next day when the share of P Ltd. has fallen by 2%, share of Q Ltd. appreciated by 5% and Nifty Futures has dropped by 2.50%.

You are required to compute the overall profit or loss to Mr. SK from these set of transactions.

- (c) 'Technical Analysis has several supporters as well several critics.' In this context state the favourable and unfavourable arguments of Technical Analysis.

OR

- (c) List the parameters to identify the currency risk.

PEM2

P.T.O.

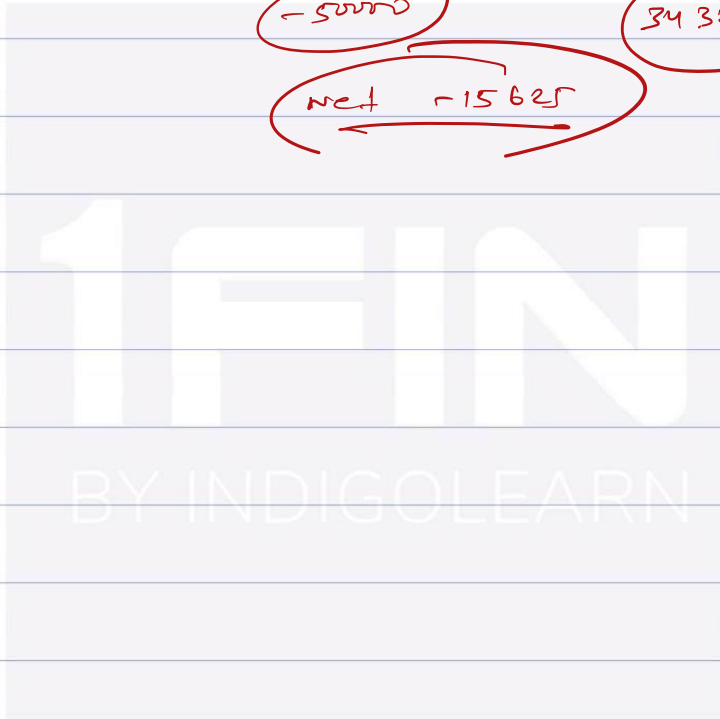
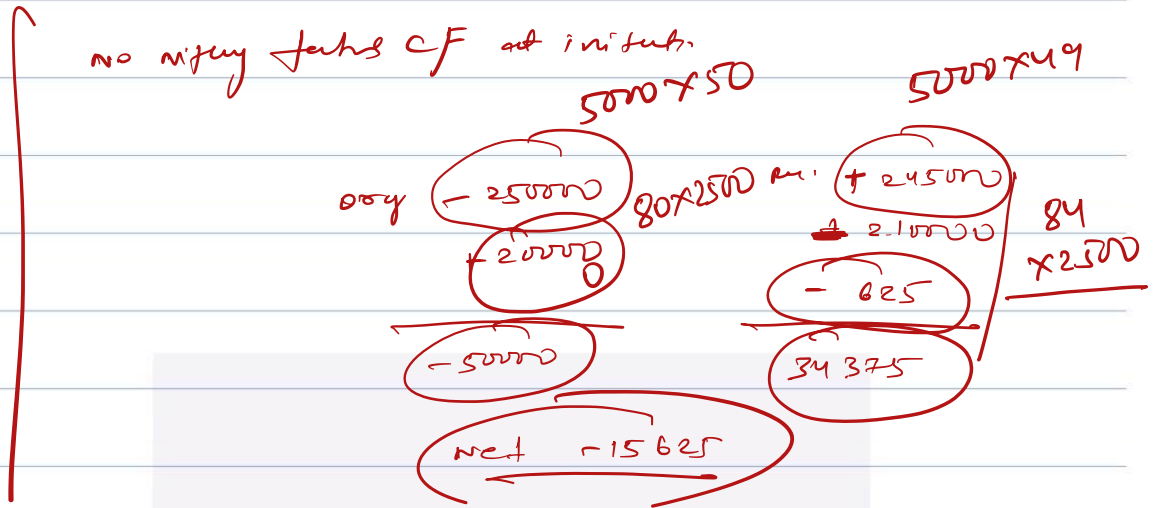
4 (b)

P 5000 buy @ 50 B1.5 250000 of
 Q 2500 sell @ 80 B2. - 200000 int
 Nifty n ?? @ 100 B1 + 25000 of
 75000
 $\frac{Q \times price \times \beta \times (1 \text{ for } B_1 - 1 \text{ for } B_2)}{N}$
 P 375000
 Q - 400000
 N + 25000
 Nifty 25000 / 1000 = 25 buy.

day 2

sell P 5000 @ 49.
 Buy Q. 2500 @ 84
 sell nifty 25 @ 775
 50 - 2% 49
 80 + 5% 84
 59375 → nifty
 N.A / 1000 = 15625 if nifty cash flow.





5. (a) Sun Ltd. manufactures high-quality modern furniture and sells to retail outlets in India and Nepal. Since the cost of quality wood in India is very high, the company is reviewing the proposal for import of wood in bulk from Nepalese supplier. The estimate of net Indian (₹) and the Nepalese Currency (NC) cash flows for this proposal is as follows :

Net Cash Flow (in millions)

Year	0	1	2	3
NC	(75,000)	7,800	11,400	12,300
Indian (₹)	0	8,607	12,600	13,800

Other information is as under :

- (i) Sun Ltd. evaluates all investments by using a discount rate of 8% per annum. All Nepalese customers are invoiced in NC. NC cash flows are converted to Indian currency (₹) at the forward rate and discounted at the Indian rate.
- (ii) Inflation rates in Nepal and India are expected to be 8% and 6% per annum respectively.

$1 \text{ INR} = 1.6 \text{ NC}$

The current exchange rate is ₹ 1 = NC 1.60.

You are required to Compute the Net Present Value (NPV) of the proposal and show your recommendation.

75 / 1.0
1.8 1.9

5a)

	NC	End	NC/End	Inv	Total Inv
0	(-75)	1.6	(-46.875)	0	-46.875
1	7.8	$1.6 \times (1.08)$	+4.785	8.607	13.392
2	11.4	$1.6 \times (1.08)^2$	6.864	12.6	19.464
3	12.3	$1.6 \times (1.08)^3$	7.268	13.8	21.068

PVF @ 8%

Total

1	-46.875
0.926	12.400
0.857	16.680
0.794	16.728
	<u>-1.065</u>

NPV is negative & hence this project is unviable.



(9)

PEM2

PVF @ 8%

Year	1	2	3
PVF	0.926	0.857	0.794

Calculation up to 3 decimal points.

- (b) In 2024, Mr. Raj, an investor made a lump sum investment in an equity mutual fund that had an entry load of ₹ 0.05 per unit. By the end of the year, the NAV appreciated by 13.60%. Additionally, the fund declared a total capital gain and dividend of ₹ 5.00 per unit, which were reinvested at a year-end NAV of ₹ 25. As a result, the investor held 15,000 units at year-end.

The fund also charges an exit load of 1% if redeemed within 1 year. The investor is in the 20% tax bracket. Inflation rate during the year is 4.50%.

You are to required to

- Calculate the number of units purchased by Mr. Raj at the beginning of the investment.
- Calculate the NAV per unit and the total investment amount made by Mr. Raj at the beginning of the year.
- Appraise the return percentage and the real return percentage, if Mr. Raj decided to exit the investment at the end of the year.

Calculation up to 2 decimal points.

PEM2

P.T.O.

5(b)

units must be $n \times NAV$

$$n \times (y + 0.05) = \text{Amt invested}$$

$$\text{you are } NAV = 1.136y$$

$$\text{divd} = 5n$$

allowing no.1 for here

$$\text{you are } NAV = 25$$

units must on reinvest

$$= 5n / 25 = n/5$$

$$n + n/5 = 15000$$

$$6n/5 = 15000$$

$$n = 12500$$

units must

$$1.136y = 25$$

$$y = 25 / 1.136$$

$$y = 22.01$$

$$\text{result} = n \times y (1 + 0.05)$$



$$12500 \times (22.01 + 0.05)$$

$$= 12500 \times 22.06$$

$$= 275750$$

Part 3

redemption value - NAV 25

growth 1%

24.75

margin

$\times 15000$

371250

less redemption

- 275750

gross

95500

less 20%

- 19100

profit

76400

return =

76400

275750

= 27.71%

if the

4.5%

salvage

$$= 1.2771 / 1.045^1 = 22.20\%$$



6. (a) ABC Ltd.'s share is currently traded at the price of ₹ 192.50 per share. Mr. Roni is planning to purchase the shares of the company. For this purpose, he has taken the services of a financial analyst to know whether the price of ABC Ltd. is fairly priced. The analyst has assembled the following information :

- The before-tax required rates of return on ABC Ltd. debt, preferred stock, and common stock are 8.60%, 11%, and 13%, respectively.
- The company's target capital structure is 20% debt, 30% preferred stock and 50% Common stock.
- The market value of the company's debt is ₹ 275 million and its preferred stock are valued at ₹ 120 million.
- ABC Ltd.'s free cash flow to the firm (FCFF) for the year just ended is ₹ 125 million. FCFF is expected to grow at a constant rate of 8% for the foreseeable future.
- The tax rate is 30%.
- ABC Ltd. has 20 million outstanding common shares.

6(a)

	Pre tax rate	Debt	Debt	Share
k_e	13%	0.5	n.	20m.
k_d	8%	0.2	275m.	
k_p	11%	0.3	120m.	

$$FCFF_1 = 125 \text{ m.}$$

g

8%

$$r_a = 30\%$$

$$WACC =$$

$$13 \times 0.5 + 11 \times 0.3 + 8 \times 0.2 \times 0.7$$

$$= 11\%$$

$$EV = \frac{FCFF_1}{WACC - g} = \frac{125 \times 1.08}{11\% - 8\%} = 4500 \text{ m.}$$

m/s Debt pay

395

Eq.

4105m.

8m

20

Eq.

205.25



Buy as undervalued

$$(2) \quad E_v = 4105 = \frac{F_{t+1}C(1+g)}{13\% - 9\%}$$

$$\frac{F_{t+1}C(1+0.085)}{13\% - 8.5\%} = 4105$$

$$F_{t+1}C = \frac{4105 \times 4.5\%}{1.085}$$

$$F_{t+1}C = 170.25 \text{ ru.}$$

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You are required to –

- (i) As a financial analyst, on the basis of value per share, advise Mr. Roni whether he should purchase the shares of the company at market price or not.
- (ii) Assume, we are to get same value of equity as calculated in (i) for using FCFE approach, calculate free cash flow to the equity (FCFE) for the year just ended, if FCFE is expected to grow at a constant rate of 8.50% for the foreseeable future.

Calculation up to 2 decimal points.

- (b) Quick & Smart Inc. is a leading software development company in the UK. It has a substantial portfolio of its trade in various countries including the USA. It has recently invoiced a USA customer the sum of USD (\$) 75,00,000 receivable in one year's time. Quick & Smart Inc.'s Chief Finance Officer (CFO) is considering two alternatives for hedging the exchange risk :

Alternative I : Borrowing present value of USD (\$) 75,00,000 now for one year, converting the amount into GBP (£), and repaying the loan out of eventual receipts.

(b)

UK CO. Inv. 7.5m USD.

365 days crdt.

USD rate 4.5%.

Ans

Pr. of 7.5m @ 4.5%.

$$= 7.5 / 1.045$$

$$= 7,177,033 \text{ USD den}$$

convert to GBP @ 1 GBP = 1.3288 USD

$$\Rightarrow 7,177,033 \text{ USD} = 7,177,033 \text{ USD}$$

$$\div 1.3288 \text{ USD / GBP}$$

$$= 5,401,39 \text{ GBP}$$

Inst @ 5% p.a

$$\text{you end with} = 5,401,39 \times 1.05$$

$$= 5,671,96 \text{ GBP}$$



fund. cost 75m @ 1.3128 USD/INR

$$\text{USD mgn} = \frac{750000}{1.3128}$$

$$= 571,298 \text{ USD}$$

fund cost betw tran very different.



(12)

PEM2

Alternative II : Entering into a 12 month forward exchange contract with the company's bank to sell the USD (\$) 75,00,000.

The spot exchange rate is GBP (£) 1 = USD (\$) 1.3288

The 12 month forward exchange rate is GBP (£) 1 = USD (\$) 1.3128

Interest rates for 12 months are = USA 4.50%; and UK 5%.

You are required to -

Calculate net proceeds in GBP (£) under both the alternatives and advise the company.

Note : Ignore bank commission and decimals.

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