J.K. SHAH®
TEST SERIES
Evaluate Learn Succeed

SUGGESTED SOLUTION

CA FINAL

SUBJECT-SFM

Test Code – FNJ 7390

BRANCH - () (Date :)

Head Office : Shraddha, 3rd Floor, Near Chinai College, Andheri (E), Mumbai – 69.

Tel : (022) 26836666

ANSWER 1(a)

BeforeMerger

(i)

	A Ltd.	**B Ltd.**
Earning after tax (Rs.)	10,00,000	2,50,000
No. of shares outstanding	4,00,000	2,00,000
EPS	Rs. 2.50	Rs. 1.25
Current Market Price/Share	Rs. 50	Rs. 20
P/E Ratio	20	16

(3 MARKS)

(ii) If B Ltd.'s P/E Ratio is10

Then, it's Current Market Price = 10 x Rs.1.25 = Rs.12.50

Exchange Ratio = 12.50 : 50 i.e. 1 share of A Ltd. for every 4 shares of B Ltd.

No. of shares to be issued = 50,000

A Ltd. Post-Merger EPS

Post-Merger Earning (10,00,000+2,50,000)	Rs.12,50,000
No. of Equity Shares after Merger (4,00,000+50,000)	4,50,000
EPS	Rs. 2.78

(3 MARKS)

(iii) Calculation of Exchange Ratio for A Ltd.'s pre-merger and post-merger EPS to be thesame

= Total earnings/Pre-merger EPS of A Ltd.

= Rs.12,50,000/Rs. 2.50 = 5,00,000 shares

Now, number of shares to be issue to B Ltd. = 5,00,000 – 4,00,000 = 1,00,000 shares
Therefore, the share exchange ratio is 1,00,000 : 2,00,000 or 1:2. It means for every two shares in B Ltd., one share should be issued from A Ltd.

(2 MARKS)

ANSWER 1(b)

In the given case, the exchange rates are indirect. These can be converted into direct rates as follows:

Spot rate

$$\text{GBP} = \frac{1}{\text{USD}1.5617} \quad \text{to} \quad \frac{1}{\text{USD}1.5673}$$

USD = GBP 0.64033 - GBP 0.63804

6 months' forward rate

GBP = $\frac{1}{\text{USD}1.5455}$ to $\frac{1}{\text{USD}1.5609}$

USD = GBP 0.64704 - GBP 0.64066

(1 MARK)

Payoff in 3 alternatives

i. Forward Cover

Amount payable	USD 3,64,897
Forward rate	GBP 0.64704
Payable in	GBP GBP 2,36,103

(1 MARK)

ii. Money market Cover

Amount payable	USD 3,64,897	
PV @ 4.5% for 6 months i.e. $\frac{1}{1.0225}$ = 0.9779951	USD 3,56,867	
Spot rate purchase	GBP 0.64033	
Borrow GBP 3,56,867 x 0.64033		GBP 2,28,512
Interest for 6 months @ 7 %		7,998
		-
Payable after 6 months		GBP 2,36,510

(2 MARKS)

iii. Currency options

Amount payable		USD 3,64,897
Unit in Options contract		GBP 12,500
Value in USD at strike rate of 1.70 (GBP 12,500 x 1.70)		USD 21,250
Number of contracts USD 3,64,897/ USD 21,250		17.17
Exposure covered USD 21,250 x 17	USD	3,61,250
Exposure to be covered by Forward (USD 3,64,897 – USD 3,61,250)	USD	3,647
Options premium 17 x GBP 12,500 x 0.096	USD	20,400
Premium in GBP (USD 20,400 x 0.64033)		GBP 13,063

Total payment in currency option	
Payment under option (17 x 12,500)	GBP 2,12,500
Premium payable	GBP 13,063
Payment for forward cover (USD 3,647 x 0.64704)	GBP 2,360
	GBP 2,27,923

(3 MARKS)

Thus total payment in:

(i)	Forward Cover	GBP 2,36,103
(ii)	Money Market	GBP 2,36,510
(iii)	Currency Option	GBP 2,27,923

The company should take currency option for hedging the risk.

Note: Even interest on Option Premium can also be considered in the above solution.

(1 MARK)

ANSWER 1(c)

VAR is a measure of risk of investment. Given the normal market condition in a set of period, say, one day it estimates how much an investment might lose. This investment can be a portfolio, capital investment or foreign exchange etc., VAR answers two basic questions -

(i) What is worst case scenario?

(ii) What will be loss?

It was first applied in 1922 in New York Stock Exchange, entered the financial world in 1990s and become world's most widely used measure of financial risk.

Features of VAR

Following are main features of VAR

(i) Components of Calculations: VAR calculation is based on following three components :

(a) Time Period

(b) Confidence Level – Generally 95% and 99%

(c) Loss in percentage or in amount

(ii) Statistical Method: It is a type of statistical tool based on Standard Deviation.

(iii) Time Horizon: VAR can be applied for different time horizons say one day, one week, one month and so on.

(iv) Probability: Assuming the values are normally attributed, probability of maximum loss can be predicted.

(v) Control Risk: Risk can be controlled by selling limits for maximum loss.

(vi) Z Score: Z Score indicates how many standard Deviations is away from Mean value of a population. When it is multiplied with Standard Deviation it provides VAR.

Application of VAR

VAR can be applied

(i) to measure the maximum possible loss on any portfolio or a trading position.

(ii) as a benchmark for performance measurement of any operation or trading.

(iii) to fix limits for individuals dealing in front office of a treasury department.

(iv) to enable the management to decide the trading strategies.

(v) as a tool for Asset and Liability Management especially in banks.

(4 MARKS)

ANSWER 2(a)

Security	**No. of shares (1)**	**Market Price of Per Share (2)**	**(1) × (2)**	**% to total (w)**	**β (x)**	**wx**
VSL	10000	50	500000	0.4167	0.9	0.375
CSL	5000	20	100000	0.0833	1	0.083
SML	8000	25	200000	0.1667	1.5	0.250
APL	2000	200	400000	0.3333	1.2	0.400
			1200000	**1**		**1.108**

Portfolio beta 1.108

(2 MARKS)

(i) Required Beta 0.8

It should become (0.8 / 1.108) 72.2 % of present portfolio

If Rs. 12,00,000 is 72.20%, the total portfolio should be

Rs. 12,00,000 × 100/72.20 or Rs. 16,62,050

Additional investment in zero risk should be (Rs. 16,62,050 – Rs. 12,00,000) = Rs. 4,62,050

(1 MARK)

Revised Portfolio will be

Security	No. of shares (1)	Market Price of Per Share (2)	(1) × (2)	% to total (w)	ß (x)	Wx
VSL	10000	50	50000	0.3008	0.9	0.271
CSL	5000	20	100000	0.0602	1	0.060
SML	8000	25	200000	0.1203	1.5	0.180
APL	2000	200	400000	0.2407	1.2	0.289
Risk free asset	46205	10	462050	0.2780	0	0
			1662050	1		0.800

(2 MARKS)

(ii) To increase Beta to 1.2

Required beta 1.2

It should become 1.2 / 1.108 108.30% of present beta

If 1200000 is 108.30%, the total portfolio should be

1200000 × 100/108.30 or 1108033 say 1108030

Additional investment should be (-) 91967 i.e. Divest Rs. 91970 of Risk Free Asset

(1 MARK)

(iii) Revised Portfolio will be

Security	No. of shares (1)	Market Price of Per Share (2)	(1) × (2)	% to total (w)	ß (x)	Wx
VSL	10000	50	500000	0.4513	0.9	0.406
CSL	5000	20	100000	0.0903	1	0.090
SML	8000	25	200000	0.1805	1.5	0.271
APL	2000	200	400000	0.3610	1.2	0.433
Risk free asset	-9197	10	-91970	-0.0830	0	0
			1108030	1		1.20

Portfolio beta 1.20

(2 MARKS)

ANSWER 2(b)

(i) Net asset value

H Ltd. $$\frac{\text{Rs.1300 Crores - Rs.300 Crores}}{\text{3.50 Crores}} = \text{Rs.285.71}$$

B Ltd. $$\frac{\text{Rs.31.50 Crores}}{\text{0.65 Crores}} = \text{Rs.48.46}$$

(2 MARKS)

(ii) Earning capitalization value

H Ltd. $\frac{\text{Rs.300 Crores} / 0.08}{\text{3.50 Crores}} = \text{Rs.1071.43}$

B Ltd. $\frac{\text{Rs.10 Crores} / 0.08}{\text{0.65 Crores}} = \text{Rs.192.31}$

(2 MARKS)

(iii) Fair value

H Ltd. $\frac{\text{Rs.285.71 x 1 + Rs.1071.43 x 3}}{4} = \text{Rs.875}$

B Ltd. $\frac{\text{Rs.48.46 x 1 + Rs.192.31 x 3}}{4} = \text{Rs.156.3475}$

(3 MARKS)

Exchange ratio Rs.156.3475/ Rs.875 = 0.1787

H Ltd should issue its 0.1787 share for each share of B Ltd.

Note: In above solution it has been assumed that the contingent liability will materialize at its full amount.

(1 MARK)

ANSWER 2(c)

The steps involvedinmechanismofsecuritizationareas follows:

(i) Creation of Pool of Assets: The process of securitization begins with creation of pool of assets by segregation of assets backed by similar type of mortgages in terms of interest rate, risk, maturity and concentrationunits.

(ii) **Transfer to SPV:** Once assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for thispurpose.

(iii) **Sale of Securitized Papers:** SPV designs the instruments based on nature of interest, risk, tenure etc. based on pool of assets. These instruments can be Pass ThroughSecurity or Pay ThroughCertificates.

(iv) **Administration of assets:** The administration of assets in subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV, which works as aconduit.

(v) **Recourse to Originator:** Performance of securitized papers depends on the performance of underlying assets and unless specified in case of default they go back to originator fromSPV.

(vi) **Repayment of funds:** SPV will repay the funds in form of interest and principal that arises from the assetspooled.

(vii) **Credit Rating to Instruments:** Sometime before the sale of securitized instruments credit rating can be done to assess the risk of theissuer.

(4 MARKS)

ANSWER 3(a)

(i) Given: TIC Ltd. Current Price = Rs. 415

Exercise rate = 400

Risk free interest rate is = 5% p.a.

SD (Volatility) = 22%

Based on the above bit is calculated value of an option based on Block Scholes Model:

$$1 = \frac{I_n\left(\frac{415}{400}\right) + \left[.05 + \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{.03681 + .01855}{.11} = .5032727$$

$$d_2 = \frac{I_n\left(\frac{415}{400}\right) + \left[.05 - \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{.03681 + .00645}{.11} = .3932727$$

$N(d_1) = N(.50327) = 1 - .3072 = .6928$

$N(d_2) = N(.39327) = 1 - .3471 = .6529$

Value of Option = $415(.6928) - \frac{400}{e^{(.05)(.25)}}(.6529)$

$= 287.512 - \frac{400}{1.012578}(.6529) = 287.512 - 257.916 = Rs.29.60$

NB : N(0.39327) can also be find as under :

Step 1 : From table of area under normal curve find the area of variable 0.39 i.e. 0.6517.

Step 2 : From table of area under normal curve find the area of variable 0.40.

Step 3 : Find out the difference between above two variables and areas under normal curve.

Step 4 : Using interpolation method find out the value of 0.00327. Which is as follows:

$$\frac{0.0037}{0.01} \text{x} 0.00327 = 0.0012$$

Step 5 : Add this value, computed above to the N(0.39).

Thus N (0.39327) = 0.6517 + 0.0012 = 0.6529

Since market price of Rs. 25 is less than Rs. 29.60 (Block Scholes Valuation model) indicate that option is underpriced, hence worth buying.

(ii) If the current price is taken as Rs. 380 the computations are as follows:

$$d_1 = \frac{I_n\left(\frac{380}{400}\right) + \left[.05 + \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{-0.05129 + .01855}{.11} = -0.297636$$

$$d_2 = \frac{I_n\left(\frac{380}{400}\right) + \left[.05 - \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{-0.05129 + .00645}{.11} = -0.407666$$

$$V_o = V_s\, N(d_1) - \frac{E}{e^n} N(d_2)$$

$N(d_1) = N(-0.297636) = .3830$

$N(d_2) = N(-0.407666) = .3418$

$380\ (.3830) - \frac{400}{e.^{(.05)(.25)}} \text{x}\ (.3418)$

$145.54 - \frac{400}{1.012578}(.3418) = 145.54 - 135.02 = 10.52$

(iii) Value of call option = Rs. 7.10

Current Market Value = Rs. 415

Present Value of Exercise Price = $\frac{400}{1.0125} = 395.06$

$V_p = -V_s + V_s + PV(E)$

V_p = -380 + 7.10 + 395.06 = 22.16 = Rs. 22.16 Ans

(iv) Since dividend is expected to be paid in two months time we have to adjust the share price and then use Block Scholes model to value the option:

Present Value of Dividend (using continuous discounting) = Dividend × e^{-rt}

= Rs. 10 × $e^{-.05 \times .1666}$

= Rs. 10 × $e^{-.008333}$

= Rs. 9.917 (Please refer Exponential Table)

Adjusted price of shares is Rs. 408 – 9.917 = Rs. 398.083

This can be used in Block Scholes model

$$d_1 = \frac{I_n\left(\frac{398.083}{400}\right) + \left[.05 + \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{-.00480 + .01855}{.11} = .125$$

$$d_2 = \frac{I_n\left(\frac{398.083}{400}\right) + \left[.05 - \frac{1}{2}(.22)^2\right].25}{.22\sqrt{.25}} = \frac{-.00480 + .00645}{11} = 0.15$$

$N(d_1) = N(.125) = .5498$

$N(d_2) = N(.015) = .5060$

Value of Option 398.0 83 (.5498) - $\frac{400}{e^{(.05)(.25)}}(.5060)$

218.866 - $\frac{400}{e^{0125}}(.5060)$

218.866 - $\frac{400}{1.012578}(.5060) = 218.866 - 199.8858 = Rs.18.98$

(10 MARKS)

ANSWER 3(b)

The expected rate of return on equity after 2018 = 0.0625 + 1.10(0.055) = 12.3%

The dividends from 2013 onwards can be estimated as :

Year	2013	2014	2015	2016	2017	2018	2019
Earnings Per Share (€)	2.1	2.415	2.78	3.19	3.67	4.22	4.48
Dividends Per Share (€)	0.69	0.794	0.913	1.048	1.206	1.387	2.91

a. The price as of 2018 = € 2.91/(0.123 – 0.06) = € 46.19

b. The required rate of return upto 2018 = 0.0625 + 1.4(0.055) = 13.95%. The dividends upto 2018 are discounted using this rate as follow :

Year	PV of Dividend
2014	0.794/1.1395 = 0.70
2015	$0.913/(1.1395)^2$ = 0.70
2016	$1.048/(1.1395)^3$ = 0.70
2017	$1.206/(1.1395)^4$ = 0.72
2018	$1.387/(1.1395)^5$ = 0.72
Total	3.54

The current price = € 3.54 + € $46.19/(1.1395)^5$ = € 27.58.

(6 MARKS)

ANSWER 3(c)

Startup India scheme was initiated by the Government of India on 16thof January, 2016. The definition of startup was provided which is applicable only in case of Government Schemes.

- **Startup means an entity, incorporated or registered in India (at the date of initiation of thescheme):**
  - Not prior to fiveyears,
  - With annual turnover not exceeding Rs.25 crore in any preceding financial year, and
  - Working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.

Provided that such entity is not formed by splitting up, or reconstruction, of a business already in existence.Provided also that an entity shall cease to be a Startupif its turnover for the previous financial years has exceeded Rs. 25 crore or it has completed 5 years from the date of incorporation/ registration.Provided further that a Startup shall be eligible for tax benefits only after it has obtained certification from the Inter - Ministerial Board, setup for suchpurpose.

(4 MARKS)

ANSWER 4(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

(0.5 MARK)

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

(3 MARKS)

(b) Cash generation by exports

	$ 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

(2 MARKS)

(c) 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

(1 MARK)

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.

(1.5 MARKS)

ANSWER 4(b)
Swap Ratio

	Efficient Ltd.	**Healthy Ltd.**
Market capitalization	500 lakhs	750 lakhs
No. of shares	10 lakhs	7.5 lakhs
Market Price per share	Rs. 50	Rs. 100
P/E ratio	10	5
EPS	Rs. 5	Rs. 20
Profit	Rs. 50 lakh	Rs. 150 lakh
Share capital	Rs. 100 lakh	Rs. 75 lakh
Reserves and surplus	Rs. 300 lakh	Rs. 165 lakh
Total	Rs. 400 lakh	Rs. 240 lakh
Book Value per share	Rs. 40	Rs. 32

(3 MARKS)

(i) Calculation of Swap Ratio

EPS	1 : 4 i.e.	4.0 × 40%	1.6
Book value	1 : 0.8 i.e.	0.8 × 25%	0.2
Market price	1 : 2 i.e.	2.0 × 35%	0.7
Total			2.5

Swap ratio is for every one share of Healthy Ltd., to issue 2.5 shares of Efficient Ltd. Hence, total no. of shares to be issued 7.5 lakh × 2.5 = 18.75 lakh shares.

Promoter's holding = 4.75 lakh shares + (5 × 2.5 = 12.5 lakh shares) = 17.25 lakh i.e. Promoter's holding % is (17.25 lakh/28.75 lakh) × 100 = 60%.

(2 MARKS)

Calculation of EPS, Market price, Market capitalization and free float market capitalization.

(ii)	Total No. of shares	10 lakh + 18.75 lakh = 28.75 lakh
	Total capital	100 lakh + 187.5 lakh = Rs. 287.5 lakh
	EPS	$\frac{\text{Total Profit}}{\text{No. of shares}} = \frac{50 \text{ lakh} + 150 \text{ lakh}}{28.75 \text{ lakh}} = \frac{200}{28.75}$
		= Rs. 6.956
(iii)	Expected market price	EPS 6.956 × P/E 10 = Rs. 69.56
	Market capitalization	= Rs. 69.56 per share × 28.75 lakh shares
		= Rs. 1,999.85 lakh
(iv)	Free float of market capitalization	= Rs. 69.56 per share × (28.75 lakh × 40%)
		= Rs. 799.94 lakh

(3 MARKS)

ANSWER 4(c)

The following factors may particularly be kept in mind while assessing the factors relating to an industry.

(i) Product Life – Cycle : An industry usually exhibits high profitability in the initial and growth stages, medium but steady profitability in the maturity stage and a sharp decline in profitability in the last stage of growth.

(ii) Demand Supply Gap : Excess supply reduces the profitability of the industry because of the decline in the unit price realization, while insufficient supply tends to improve the profitability because of higher unit price realization.

(iii) Barriers to Entry : Any industry with high profitability would attract fresh investments. The potential entrants to the industry, however, face different types of barriers to entry. Some of these barriers are innate to the product and the technology of production, while other barriers are created by existing firms in the industry.

(iv) Government Attitude : The attitude of the government towards an industry is a crucial determinant of its prospects.

(v) State of Competition in the Industry : Factors to be noted are firms with leadership capability and the nature of competition amongst them in foreign and domestic market, type of products manufactured viz. homogeneous or highly differentiated, demand prospects through classification viz customer – wise / area – wise, changes in demand patterns in the long /immediate / short run, type of industry the firm is placed viz. growth, cyclical, defensive or decline.

(vi) Cost Conditions and Profitability : The price of a share depends on its return, which in turn depends on profitability of the firm. Profitability depends on the state of competition in the industry, cost control measures adopted by its units and growth in demand for its products.

(vii) Technology and Research : They play a vital role in the growth and survival of a particular industry. Technology is subject to change very fast leading to obsolescence. Industries which update themselves have a competitive advantage over others in terms of quality, price etc.

(4 MARKS)

ANSWER 5(a)

If foreign exchange risk ishedged

				Total (Rs.)
Sum due	Yen78,00,000	US$1,02,300	Euro 95,920	
Unit input price	Yen 650	US$10.23	Euro 11.99	
Unit sold	12000	10000	8000	
Variable cost per unit	Rs.225/-	395	510	
Variable cost	Rs.27,00,000	Rs.39,50,000	Rs. 40,80,000	Rs. 1,07,30,000
Three months forward rate forselling	2.427	0.0216	0.0178	
Rupee value of receipts	Rs.32,13,844	Rs.47,36,111	Rs. 53,88,764	Rs. 1,33,38,719
Contribution	Rs.5,13,844	Rs. 7,86,111	Rs. 13,08,764	Rs. 26,08,719
Average contribution to sale ratio				19.56%

If risk is not hedged				
Rupee value of receipt	Rs.31,72,021	Rs.47,44,898	Rs. 53,58,659	Rs. 1,32,75,578
Total contribution				Rs. 25,45,578
Average contribution to sale ratio				19.17%

AKC Ltd. Is advised to hedge its foreign currency exchange risk.

(8 MARKS)

ANSWER 5(b)

(i) Total Risk = Systematic Risk + Unsystematic Risk

Stock A

Systematic Risk = $\beta^2\sigma_m^2$ = $(0.8)^2$ x $(25)^2$ = 400

Unsystematic Risk = 35^2

Total Risk = $\sigma = \sqrt{400 + (35)^2} = \sqrt{1625}$ = 40.31%

(2 MARKS)

Stock B

Systematic Risk = $\beta^2\sigma_m^2$ = $(1.2)^2$ x $(25)^2$ = 900

Unsystematic Risk = 45^2

Total Risk = $\sigma = \sqrt{900 + (45)^2} = \sqrt{2925}$ = 54.08%

(2 MARKS)

(ii) Expected return of the portfolio

(0.25 x 14) + (0.40 x 18) + (0.35 x 6) = 12.8%

Total Risk = Systematic Risk + Unsystematic Risk

Systematic Risk $\beta\rho^2\sigma_m^2$

$\beta\rho$ = 0.25(0.8)+0.4(1.2)+0.35(0)=0.2+0.48+0=0.68

Systematic Risk of Portfolio = $\sqrt{(0.68)^2 \text{ x } (25)^2} = \sqrt{289}$

Non Systematic Risk of Portfolio

= $(0.25)^2$ $(35)^2$ + $(0.40)^2$ $(45)^2$ + 0 = 76.56 + 324 =$\sqrt{400.56}$

Total Risk = $\sqrt{289 + 400.56}$ = 26.26

(4 MARKS)

ANSWER 5(c)

Thekeydecisionsfallingwithinthescopeoffinancialstrategyincludethefollowing:

1. **Financing decisions:** These decisions deal with the mode of financing or mix of equity capital and debtcapital.
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 andrisk.
3. **Dividend decisions:** These decisions determine the division of earnings between payments to shareholders and reinvestment in thecompany.
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 investmentsthemselves.

(4 MARKS)

ANSWER 6(a)

(i) Return of Mrs. Charu invested in Plan A (Dividend Reinvestment) (Amount in Rs.)

Date	Investment	Dividend payout(%)	Dividend Re-invested (Closing Units X Face value of Rs.10 X Dividend Payout %)	NAV	Units	Closing Unit Balance" Units
01.04.2009	1,00,000.00			10.00	10,000.00	10,000.00
28.07.2013		20	20,000.00	30.70	651.47	10,651.47
31.03.2014		70	74,560.29	58.42	1,276.28	11,927.75
31.10.2017		40	47,711.00	42.18	1,131.13	13,058.88
15.03.2018		25	32,647.20	46.45	702.85	13,761.73
24.03.2019		40	55,046.92	48.10	1,144.43	14,906.16

Redemption value 14,906.16 x 53.75	8,01,206.10
Less: Security Transaction Tax (STT) is 0.2%	1,602.41
Net amount received	7,99,603.69
Less: Short term capital gain tax @ 10% on 1,144.43 (53.64* – 48.10 ≈) = 6,340	634
Net of tax	7,98,969.69
Less: Investment	1,00,000.00
	6,98,969.69

*(53.75 – STT @ 0.2%) ≈ This value can also be taken as zero

Annual average return (%) $\frac{6,98,969.69}{1,00,000} \times \frac{12}{124} \times 100 = 67.64\%$

(4 MARKS)

(ii) Return of Mr. Anand invested in Plan B – (Bonus)

(Amount in Rs.)				
Date	**Units**	**Bonus units**	**Total Balance**	**NAV per unit**
01.04.2009	10,000		10,000	10
31.03.2014		12,500	22,500	31.05
31.03.2018		7,500	30,000	20.05
24.03.2019		7,500	37,500	19.95

Redemption value 37,500 x 22.98	8,61,750.00
Less: Security Transaction Tax (STT) is 0.2%	1,723.50
Net amount received	8,60,026.50
Less: Short term capital gain tax @ 10% 7,500 x(22.93† – 19.95) = 22,350	2,235.00
Net of tax	8,57,791.50
Less: Investment	1,00,000.00
Net gain	7,57,791.50

† (22.98 – STT @ 0.2%)

Annual average return (%) $\frac{7,57,791.50}{1,00,000} \times \frac{12}{124} \times 100 = 73.33\%$

(3 MARKS)

(iii) Return of Mr. Bacchan invested in Plan C – (Growth)

Particulars	**(Amount in Rs.)**
Redemption value 10,000 x 82.07	8,20,700.00
Less: Security Transaction Tax (S.T.T) is .2%	1,641.40
Net amount received	8,19,058.60
Less: Short term capital gain tax @ 10%	0.00
Net of tax	8,19,058.60
Less: Investment	1,00,000.00
Net gain	7,19,058.60

Annual average return (%) $\frac{7,19,058}{1,00,000} \times \frac{12}{124} \times 100 = 69.59\%$

Note: Alternatively, figure of * and † can be taken as without net of Tax because, as per Proviso 5 of Section 48 of IT Act, no deduction of STT shall be allowed in computation of Capital Gain.

(3 MARKS)

ANSWER 6(b)

(a) The pay – off of each leg shall be computed as follows :

Cap Receipt

Max {0, [Notional principal × (LIBOR on Reset date – Cap Strike Rate) $\times \frac{\text{Number of days in the settlment period}}{365}$}

Floor Pay – off

Max {0, [Notional principal × (Floor Strike Rate – LIBOR on Reset date) $\times \frac{\text{Number of days in the settlement period}}{365}$}

Statement showing effective interest on each re – set date

Reset Date	LIBOR	Days	Interest Payment ($) LIBOR + 0.50%	Cap Receipts ($)	Floor pay – off ($)	Effective Interest
31.12.2016	6.00	184	3,27,671	0	0	3,27,671
30.06.2017	7.50	181	3,96,712	24,795	0	3,71,917
31.12.2017	5.00	184	22,77,260	0	0	2,77,260
30.06.2018	4.00	181	1,98,356	0	0	1,98,356
31.12.2018	3.75	184	1,89,041	0	12,603	2,01,644
30.06.2019	4.25	182	2,36,849	0	0	2,36,849
Total		1096				16,26,094

(5 MARKS)

(b) Average Annual Effect Interest Rate shall be computed as follows :

$$\frac{16,26,094}{1,00,00,000} \times \frac{365}{1096} \times 100 = 5.42\%$$

(1 MARK)

ANSWER 6(c)

The financial risk can be viewed by different stakeholders asfollows:

(i) **From shareholder's and lender'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 the event of winding up of a company they will be least be givenpriority.

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 intoliquidation.

(iii) **From Government's point of view:** From Government's point of view, the financial risk can be viewed as failure of any bank (like Lehman Brothers) or 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 debtcrisis.

(4 MARKS)

OR

ANSWER 6(c)

Following are main problems faced in growth of Securitization of instruments especially in Indiancontext:

Stamp Duty: Stamp Duty is one of the obstacles in India. Under Transfer of Property Act, 1882, a mortgage debt stamp duty which even goes upto 12% in some states of India and this impeded the growth of securitization in India. It should be noted that since pass through certificate does not evidence any debt only able to receivable, they are exempted from stamp duty.

Moreover, in India, recognizing the special nature of securitized instruments in some states has reduced the stamp duty on them.

Taxation: Taxation is another area of concern in India. In the absence of any specific provision relating to securitized instruments in Income Tax Act, experts' opinion differs a lot. Some are of opinion that SPV as a trustee is liable to be taxed in a representative capacity. While, others are of view that instead of SPV, investors will be taxed on their share of income. Clarity is also required on the issues of capital gain implications on passing payments to theinvestors.

Accounting: Accounting and reporting of securitized assets in the books of originator is another area of concern. Although securitization is slated to an off -balance sheet instrument but in true sense receivables are removed from originator's balance sheet. Problem arises especially when assets are transferred without recourse.

Lack of standardization: Every originator following his own format for documentation and administration having lack of standardization is another obstacle in the growth of securitization.

Inadequate Debt Market: Lack of existence of a well-developed debt market in India is another obstacle that hinders the growth of secondary market of securitized or asset backedsecurities.

Ineffective Foreclosure laws: For many years efforts are on for effective foreclosure but still foreclosure laws are not supportive to lending institutions and this makes securitized instruments especially mortgaged backed securities less attractive as lenders face difficultyintransferofpropertyineventofdefaultbytheborrower.

(4 MARKS)