



SUGGESTED SOLUTION

FINAL May 2019 EXAM

SUBJECT- SFM

Test Code – FNJ 7059

BRANCH - () (Date :)

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Answer 1:
(A)

(a) Determination of Weighted Average Cost of Capital

Sources of funds	Cost (%)	Proportions	Weights	Weighted Cost
Equity Stock	16	12/20	0.60	9.60
12% Bonds	$12\%(1-0.30) = 8.40$	8/20	0.40	3.36
				12.96 say 13

(b) Schedule of Depreciation

\$ Million

Year	Opening Balance of Fixed Assets	Addition during the year	Total	Depreciation @ 15%
1	17.00	0.50	17.50	2.63
2	14.87	0.80	15.67	2.35
3	13.32	2.00	15.32	2.30
4	13.02	2.50	15.52	2.33
5	13.19	3.50	16.69	2.50
6	14.19	2.50	16.69	2.50
7	14.19	1.50	15.69	2.35
8	13.34	1.00	14.34	2.15

(c) Determination of Investment

\$ Million

Year	Investment Required			Existing Investment	Additional Investment
	For Capital Expenditure	CA (20% of Revenue)	Total		
1	0.50	1.60	2.10	3.00	0.00
2	0.80	2.00	2.80	2.50*	0.30
3	2.00	3.00	5.00	2.00**	3.00
4	2.50	4.40	6.90	3.00	3.90
5	3.50	6.00	9.50	4.40	5.10
6	2.50	5.20	7.70	6.00	1.70
7	1.50	4.60	6.10	5.20	0.90
8	1.00	4.00	5.00	4.60	0.40

* Balance of CA in Year 1 (\$3 Million) – Capital Expenditure in Year 1(\$ 0.50 Million)

** Similarly balance of CA in Year 2 (\$2.80) – Capital Expenditure in Year 2(\$ 0.80 Million)

(d) Determination of Present Value of Cash Inflows

\$ Million

Particulars	Years							
	1	2	3	4	5	6	7	8
Revenue (A)	8.00	10.00	15.00	22.00	30.00	26.00	23.00	20.00
Less: Expenses								
Variable Costs	3.20	4.00	6.00	8.80	12.00	10.40	9.20	8.00
Fixed cash operating cost	1.60	1.60	1.60	1.60	2.00	2.00	2.00	2.00
Advertisement Cost	0.50	1.50	1.50	3.00	3.00	3.00	1.00	1.00
Depreciation	2.63	2.35	2.30	2.33	2.50	2.50	2.35	2.15
Total Expenses (B)	7.93	9.45	11.40	15.73	19.50	17.90	14.55	13.15
EBIT (C) = (A) - (B)	0.07	0.55	3.60	6.27	10.50	8.10	8.45	6.85
Less: Taxes@30% (D)	0.02	0.16	1.08	1.88	3.15	2.43	2.53	2.06
NOPAT (E) = (C) - (D)	0.05	0.39	2.52	4.39	7.35	5.67	5.92	4.79
Gross Cash Flow (F) =(E) + Dep	2.68	2.74	4.82	6.72	9.85	8.17	8.27	6.94
Less: Investment in Capital Assets								
plus Current Assets (G)	0	0.30	3.00	3.90	5.10	1.70	0.90	0.40
Free Cash Flow (H) = (F) - (G)	2.68	2.44	1.82	2.82	4.75	6.47	7.37	6.54
PVF@13% (I)	0.885	0.783	0.693	0.613	0.543	0.480	0.425	0.376
PV (H)(I)	2.371	1.911	1.261	1.729	2.579	3.106	3.132	2.46

Total present value = \$ 18.549 million

(e) Determination of Present Value of Continuing Value (CV)

$$CV = \frac{FCF_0}{k - g} = \frac{\$6.54 \text{ million} (1.05)}{0.13 - 0.05} = \frac{\$6.867 \text{ million}}{0.08} = \$85.8375 \text{ million}$$

Present Value of Continuing Value (CV) = \$85.8376 million X PVF_{13%,8} = \$85.96875 million X 0.376 = \$32.2749 million

(i) Value of Firm

	\$ Million
Present Value of cash flow during explicit period	18.5490
Present Value of Continuing Value	<u>32.2749</u>
Total Value	<u>50.8239</u>

(ii) Value of Equity

	\$ Million
Total Value of Firm	50.8239
Less: Value of Debt	<u>8.0000</u>
Value of Equity	<u>42.8239</u>

(B)

Some of the techniques used for economic analysis are:

- (a) Anticipatory Surveys: They help investors to form an opinion about the future state of the economy. It incorporates expert opinion on construction activities, expenditure on plant and machinery, levels of inventory – all having a definite bearing on economic activities. Also future spending habits of consumers are taken into account.

In spite of valuable inputs available through this method, it has certain drawbacks:

- (i) Survey results do not guarantee that intentions surveyed would materialize.
- (ii) They are not regarded as forecasts per se, as there can be a consensus approach by the investor for exercising his opinion.

Continuous monitoring of this practice is called for to make this technique popular.

- (b) Barometer/Indicator Approach: Various indicators are used to find out how the economy shall perform in the future. The indicators have been classified as under:
- (i) **Leading Indicators**: They lead the economic activity in terms of their outcome. They relate to the time series data of the variables that reach high/low points in advance of economic activity.
 - (ii) **Roughly Coincidental Indicators**: They reach their peaks and troughs at approximately the same in the economy.
 - (iii) **Lagging Indicators**: They are time series data of variables that lag behind in their consequences vis-a- vis the economy. They reach their turning points after the economy has reached its own already.
- (c) Economic Model Building Approach: In this approach, a precise and clear relationship between dependent and independent variables is determined. GNP model building or sectoral analysis is used in practice through the use of national accounting framework. The steps used are as follows:
- (i) Hypothesize total economic demand by measuring total income (GNP) based on political stability, rate of inflation, changes in economic levels.
 - (ii) Forecasting the GNP by estimating levels of various components viz. consumption expenditure, gross private domestic investment, government purchases of goods/services, net exports.
 - (iii) After forecasting individual components of GNP, add them up to obtain the forecasted GNP.
 - (iv) Comparison is made of total GNP thus arrived at with that from an independent agency for the forecast of GNP and then the overall forecast is tested for consistency. This is carried out for ensuring that both the total forecast and the component wise forecast fit together in a reasonable manner.

(c)

Duration of Bond X

Year	Cash flow	P.V. @ 10%		Proportion of bond value	Proportion of bond value x time (years)
1	1070	.909	972.63	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	80	.909	72.72	0.077	0.077
2	80	.826	66.08	0.071	0.142
3	80	.751	60.08	0.064	0.192
4	1080	.683	<u>737.64</u>	<u>0.788</u>	<u>3.152</u>
			<u>936.52</u>	<u>1.000</u>	<u>3.563</u>

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 year the proportion of investment in each of these two securities shall be computed as follows:

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

$$x_1 = 0.61$$

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 Rs. 1,00,000 for 2 years @ 10% x 61%	PV of Rs. 1,00,000 for 2 years @ 10% x 39%
= Rs. 1,00,000 (0.826) x 61%	= Rs. 1,00,000 (0.826) x 39%
= Rs. 50,386	= Rs. 32,214
No. of Bonds to be purchased	No. of Bonds to be purchased
= Rs. 50,386 / Rs. 972.73 = 51.79 i.e. approx.	= Rs. 32,214 / Rs. 936.52 = 34.40 i.e. approx.
52 bonds	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.

Answer 2:

(A)

$$\text{We have } E_p = W_1E_1 + W_3E_3 + \dots W_nE_n$$

$$\text{and for standard deviation } \sigma_p^2 = \sum_{i=1}^n \sum_{j=1}^n w_i w_j \sigma_{ij}$$

$$\sigma_p^2 = \sum_{i=1}^n \sum_{j=1}^n w_i w_j \rho_{ij} \sigma_i \sigma_j$$

Two asset portfolio

$$\sigma_p^2 = w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2w_1 w_2 \sigma_1 \sigma_2 \rho_{12}$$

Substituting the respective values we get,

(i) All funds invested in B

$$E_p = 12\%$$

$$\sigma_p = 10\%$$

(ii) 50% of funds in each of B & D

$$E_p = 0.50 \times 12\% + 0.50 \times 20\% = 16\%$$

$$\sigma_p^2 = (0.50)^2 (10\%)^2 + (0.50)^2 (18\%)^2 + 2(0.50)(0.50)(0.15)(10\%)(18\%)$$

$$\sigma_p^2 = 25 + 81 + 13.5 = 119.50$$

$$\sigma_p = 10.93\%$$

(iii) 75% in B and 25% in D

$$E_p = 0.75 \times 12\% + 0.25 \times 20\% = 14\%$$

$$\sigma_p^2 = (0.75)^2 (10\%)^2 + (0.25)^2 (18\%)^2 + 2(0.75)(0.25)(0.15)(10\%)(18\%)$$

$$\sigma_p^2 = 56.25 + 20.25 + 10.125 = 86.625$$

$$\sigma_p = 9.31\%$$

(iv) All funds in D

$$E_p = 20\%$$

$$\sigma_p = 18.0\%$$

Portfolio	(i)	(ii)	(iii)	(iv)
Return	12	16	14	20
σ	10	10.93	9.31	18

In the terms of return, we see that portfolio (iv) is the best portfolio. In terms of risk we see that portfolio (iii) is the best portfolio.

(B)

No. of the Future Contract to be obtained to get a complete hedge

$$= \frac{10000 \times 22 \times 1.5 - 5000 \times \text{Rs.}40 \times 2}{\text{Rs.}1000}$$
$$= \frac{\text{Rs.}3,30,000 - \text{Rs.}4,00,000}{\text{Rs.}1000} = 70 \text{ contracts}$$

Thus, by purchasing 70 Nifty future contracts to be long to obtain a complete hedge.

Cash Outlay

$$= 10000 \times \text{Rs.} 22 - 5000 \times \text{Rs.} 40 + 70 \times \text{Rs.} 1,000$$
$$= \text{Rs.} 2,20,000 - \text{Rs.} 2,00,000 + \text{Rs.} 70,000 = \text{Rs.} 90,000$$

Cash Inflow at Close Out

$$= 10000 \times \text{Rs.} 22 \times 0.98 - 5000 \times \text{Rs.} 40 \times 1.03 + 70 \times \text{Rs.} 1,000 \times 0.985$$
$$= \text{Rs.} 2,15,600 - \text{Rs.} 2,06,000 + \text{Rs.} 68,950 = \text{Rs.} 78,550$$

Gain/ Loss

$$= \text{Rs.} 78,550 - \text{Rs.} 90,000 = - \text{Rs.} 11,450 \text{ (Loss)}$$

(C)

Business Segment	Capital-to-Sales	Segment Sales	Theoretical Values
Wholesale	0.85	€225000	€191250
Retail	1.2	€720000	€864000
General	0.8	€2500000	€2000000
Total value			€3055250

Business Segment	Capital-to-Assets	Segment Assets	Theoretical Values
Wholesale	0.7	€600000	€420000
Retail	0.7	€500000	€350000
General	0.7	€4000000	€2800000
Total value			€3570000

Business Segment	Capital-to- Operating Income	Operating Income	Theoretical Values
Wholesale	9	€75000	€675000
Retail	8	€150000	€1200000
General	4	€700000	€2800000
Total value			€4675000

$$\text{Average theoretical value} = \frac{3055250 + 3570000 + 4675000}{3} = 3766750$$

(D)

There are four asset allocation strategies:

- (a) **Integrated Asset Allocation:** Under this strategy, capital market conditions and investor objectives and constraints are examined and the allocation that best serves the investor's needs while incorporating the capital market forecast is determined.
- (b) **Strategic Asset Allocation:** Under this strategy, optimal portfolio mixes based on returns, risk, and co-variances is generated using historical information and adjusted periodically to restore target allocation within the context of the investor's objectives and constraints.
- (c) **Tactical Asset Allocation:** Under this strategy, investor's risk tolerance is assumed constant and the asset allocation is changed based on expectations about capital market conditions.
- (d) **Insured Asset Allocation:** Under this strategy, risk exposure for changing portfolio values (wealth) is adjusted; more value means more ability to take risk.

Answer 3:

(A)

- (i) By entering into an FRA, firm shall effectively lock in interest rate for a specified future in the given it is 6 months. Since, the period of 6 months is starting in 3 months, the firm shall opt for 3 × 9 FRA locking borrowing rate at 5.94%.

In the given scenarios, the net outcome shall be as follows:

	If the rate turns out to be 4.50%	If the rate turns out to be 6.50%
FRA Rate	5.94%	5.94%
Actual Interest Rate	4.50%	6.50%
Loss/ (Gain)	1.44%	(0.56%)
FRA Payment / (Receipts)	€50 m × 1.44% × ½ = €360,000	€50m × 0.56% × ½ = (€140,000)
Interest after 6 months on €50 Million at actual rates	= €50m × 4.5% × ½ = €1,125,000	= € 50m × 6.5% × ½ = €1,625,000
Net Out Flow	€ 1,485,000	€1,485,000

Thus, by entering into FRA, the firm has committed itself to a rate of 5.94% shown as follows:

$$\frac{€1,485,000}{€50,000,000} \times 100 \times \frac{12}{6} = 5.94\%$$

- (ii) Since firm is a borrower it will like to off-set interest cost by profit on Future Contract. Accordingly, if interest rate rises it will gain hence it should sell interest rate futures.

$$\begin{aligned} \text{No. of Contracts} &= \frac{\text{Amount of Borrowing}}{\text{Contract Size}} \times \frac{\text{Duration of Loan}}{3 \text{ months}} \\ &= \frac{€50,000,000}{€50,000} \times \frac{6}{3} = 2000 \text{ Contracts} \end{aligned}$$

The final outcome in the given two scenarios shall be as follows:

	If the interest rate turns out to be 4.5%	If the interest rate turns out to be 6.5%
Future Course Action:		
Sell to open	94.15	94.15
Buy to close	95.50 (100 - 4.5)	93.50 (100 - 6.5)
Loss/ (Gain)	1.35%	(0.65%)
Cash Payment (Receipt) for	€50,000×2000×	€50,000×2000×0.65%
Future Settlement	1.35%×3/12	× 3/12
	= €337,500	= (€162,500)
Interest for 6 months on €50 million at actual rates	€50 million × 4.5% × ½	€50 million × 6.5% × ½
	= €11,25,000	= €16,25,000
	€1,462,500	€1,462,500

Thus, the firm locked itself in interest rate of 5.85% shown as follows:

$$\frac{€1,462,500}{€50,000,000} \times 100 \times \frac{12}{6} = 5.85\%$$

(B)

Calculation of NPV

Year	0	1	2	3
Inflation factor in India	1.00	1.10	1.21	1.331
Inflation factor in Africa	1.00	1.40	1.96	2.744
Exchange Rate (as per IRP)	6.00	7.6364	9.7190	12.3696
Cash Flows in Rs.'000				
Real	-50000	-1500	-2000	-2500
Nominal (1)	-50000	-1650	-2420	-3327.50

Cash Flows in African Rand '000				
Real	-200000	50000	70000	90000
Nominal	-200000	70000	137200	246960
In Indian ` '000 (2)	-33333	9167	14117	19965
Net Cash Flow in Rs. '000 (1)+(2)	-83333	7517	11697	16637
PVF@20%	1	0.833	0.694	0.579
PV	-83333	6262	8118	9633

NPV of 3 years = -59320 (Rs. '000)

NPV of Terminal Value = $(16637 / 0.20) \times 0.579 = 48164$ (Rs. '000)

Total NPV of the Project = -59320 (Rs. '000) + 48164 (Rs.'000) = -11156 (Rs.'000)

Answer 4:

(A)

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

Spot rate

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

$$\text{USD} = \text{GBP } 0.64033 \quad - \quad \text{GBP } 0.63804$$

6 months' forward rate

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

$$\text{USD} = \text{GBP } 0.64704 \quad - \quad \text{GBP } 0.64066$$

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

ii. Money market Cover

Amount payable USD 3,64,897

PV @ 4.5% for 6 months i.e. $\frac{1}{1.0225} = 0.9779951$

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		<u>GBP 2,36,510</u>

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)		<u>GBP 2,360</u>
		<u>GBP 2,27,923</u>

Thus total payment in:

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

The company should take currency option for hedging the risk.

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

(B)

(a) Calculation of Profit after tax (PAT)

	Rs.
Profit before interest and tax (PBIT)	32,00,000
Less: Debenture interest (Rs. 64,00,000 × 12/100)	7,68,000

Profit before tax (PBT)		24,32,000
Less: Tax @ 35%		8,51,200
Profit after tax (PAT)		15,80,800
Less: Preference Dividend		
(Rs. 40,00,000 × 8/100)	3,20,000	
Equity Dividend (Rs. 80,00,000 × 8/100)	6,40,000	9,60,000
Retained earnings (Undistributed profit)		6,20,800

Calculation of Interest and Fixed Dividend Coverage

$$= \frac{\text{PAT} + \text{Debenture interest}}{\text{Debenture interest} + \text{Preference dividend}}$$

$$= \frac{15,80,800 + 7,68,000}{7,68,000 + 3,20,000} = \frac{23,48,800}{10,88,000} = 2.16 \text{ times}$$

(b) Calculation of Capital Gearing Ratio

$$\text{Capital Gearing Ratio} = \frac{\text{Fixed interest bearing funds}}{\text{Equity shareholders' Funds}}$$

$$= \frac{\text{Preference Share Capital} + \text{Debentures}}{\text{Equity Share Capital} + \text{Reserves}} = \frac{40,00,000 + 64,00,000}{80,00,000 + 32,00,000} = \frac{1,04,00,000}{1,12,00,000} = 0.93$$

(c) Calculation of Yield on Equity Shares:

Yield on equity shares is calculated at 50% of profits distributed and 5% on undistributed profits:

	(Rs.)
50% on distributed profits (Rs. 6,40,000 × 50/100)	3,20,000
5% on undistributed profits (Rs. 6,20,800 × 5/100)	<u>31,040</u>
Yield on equity shares	<u>3,51,040</u>

$$\text{Yield on equity shares \%} = \frac{\text{Yield on shares}}{\text{Equity share capital}} \times 100$$

$$= \frac{3,51,040}{80,00,000} \times 100 = 4.39\% \text{ or, } 4.388\%$$

Calculation of Expected Yield on Equity shares

Note: There is a scope for assumptions regarding the rates (in terms of percentage for every one

time of difference between Sun Ltd. and Industry Average) of risk premium involved with respect to Interest and Fixed Dividend Coverage and Capital Gearing Ratio. The below solution has been worked out by assuming the risk premium as:

- (i) 1% for every one time of difference for Interest and Fixed Dividend Coverage.
 - (ii) 2% for every one time of difference for Capital Gearing Ratio.
- (a) Interest and fixed dividend coverage of Sun Ltd. is 2.16 times but the industry average is 3 times. Therefore, risk premium is added to Sun Ltd. Shares @ 1% for every 1 time of difference.

$$\text{Risk Premium} = 3.00 - 2.16 (1\%) = 0.84 (1\%) = 0.84\%$$
 - (b) Capital Gearing ratio of Sun Ltd. is 0.93 but the industry average is 0.75 times. Therefore, risk premium is added to Sun Ltd. shares @ 2% for every 1 time of difference.

$$\text{Risk Premium} = (0.75 - 0.93) (2\%)$$

$$= 0.18 (2\%) = 0.36\%$$

	(%)
Normal return expected	9.60
Add: Risk premium for low interest and fixed dividend coverage	0.84
Add: Risk premium for high interest gearing ratio	<u>0.36</u>
	<u>10.80</u>

Value of Equity Share

$$= \frac{\text{Actual yeild}}{\text{Expected yield}} \times \text{paid up value of share} = \frac{4.39}{10.80} \times 100 = \text{Rs.40.65} .$$

(C)

A financial integration is a well-integrated chain of financial markets and institutions that provide financial services. Different design of financial markets is found in different countries. Financial system design can be demarcated into bank based and market based.

The bank dominated system which is prevalent in Germany is one extreme where banks play a dominant role and stock market is not that relevant. On the other hand, there is market based system, which is prevalent in USA, where banks plays a much lesser role and the economy is largely controlled by the financial markets.

Difference between bank based financial system and market based financial system

- (a) In a market based financial system, the majority of the financial power is held by the stock market and the economy is dependent on how well or poorly the stock market is performing.
- On the other hand, in bank based financial system, the economy is dependent on how well or poorly the banking system is doing.
 - In a market based system, banks are less dependent on interest from loans for their revenue enhancements and focuses on fee based services such as checking of accounts.
 - However, in a bank based system, they focus their attention more on loans and are more dependent on interest from loans for their revenue increase.
- (C) In a market-based financial economy, the wealth is spread more unevenly.
- While in a bank-based financial system, the economy's wealth is more evenly spread.
- (d) Market based financial system constantly changes and each individual within the society has the opportunity to gain or lose on any given day.
- But, in bank based financial system only a few are given the opportunity to maximize their gain.
- (e) In a market based financial system, laws are basically set forth and carried out by the government and are basically based on civil law rather than common law.
- Bank based financial system is prevalent where common law legal system is mostly there.

Answer 5:

(A)

(i) Benefits to Grape Fruit Ltd.

(a) Reduction of liabilities payable

	Rs. in lakhs
Reduction in equity share capital (6 lakh shares x Rs.75 per share)	450
Reduction in preference share capital (2 lakh shares x Rs.50 per share)	100
Waiver of outstanding debenture Interest	26

Waiver from trade creditors (Rs.340 lakhs x 0.25)	<u>85</u>
	<u>661</u>
(b) <i>Revaluation of Assets</i>	
Appreciation of Land and Building (Rs.450 lakhs - Rs.200 lakhs)	<u>250</u>
Total (A)	<u>911</u>

Amount of Rs.911 lakhs utilized to write off losses, fictitious assets and over- valued assets.

Writing off profit and loss account	525
Cost of issue of debentures	5
Preliminary expenses	10
Provision for bad and doubtful debts	15
Revaluation of Plant and Machinery (Rs.300 lakhs – Rs.180 lakhs)	120
Total (B)	<u>675</u>
Capital Reserve (A) – (B)	236

(ii) Balance sheet of Grape Fruit Ltd as at 31st March 2011 (after re-construction)

(Rs. in lakhs)

Liabilities	Amount	Assets	Amount
12 lakhs equity shares of Rs. 25/- each	300	Land & Building	450
10% Preference shares of Rs. 50/- each	100	Plant & Machinery	180
Capital Reserve	236	Furnitures & Fixtures	50
9% debentures	200	Inventory	150
Loan from Bank	74	Sundry debtors	70
Trade Creditors	255	Prov. for Doubtful Debts	<u>-15</u>
		Cash-at-Bank	280
		(Balancing figure)*	
	<u>1165</u>		<u>1165</u>

*Opening Balance of Rs.130/- lakhs + Sale proceeds from issue of new equity shares Rs.150/- lakhs.

(B)

Steps in securitization mechanism:

(1) 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 concentration units.

(2) Transfer to SPV

Once assets have been pooled, they are transferred to Special Purpose Vehicle (SPV) especially created for this purpose.

(3) 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 Through Security or Pay Through Certificates.

(4) Administration of assets

The administration of assets is subcontracted back to originator which collects principal and interest from underlying assets and transfer it to SPV, which works as a conduct.

(5) 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 from SPV.

(6) Repayment of funds

SPV will repay the funds in form of interest and principal that arises from the assets pooled.

(7) Credit Rating to Instruments

Sometime before the sale of securitized instruments credit rating can be done to assess the risk of the issuer.

(C)

(i) Computation of Expected Return from Portfolio

Security	Beta (β)	Expected Return (r) as per CAPM	Amount (Rs. Lakhs)	Weights(w)	wr
Moderate	0.50	$8\% + 0.50(10\% - 8\%) = 9\%$	60	0.115	1.035
Better	1.00	$8\% + 1.00(10\% - 8\%) = 10\%$	80	0.154	1.540
Good	0.80	$8\% + 0.80(10\% - 8\%) = 9.60\%$	100	0.192	1.843
V. Good	1.20	$8\% + 1.20(10\% - 8\%) = 10.40\%$	120	0.231	2.402

Best	1.50	$8\% + 1.50(10\% - 8\%) = 11\%$	160	0.308	3.388
Total			520	1	10.208

Thus Expected Return from Portfolio 10.208% say 10.21%.

Alternatively, it can be computed as follows:

$$\text{Average } \beta = 0.50 \times \frac{60}{520} + 1.00 \times \frac{80}{520} + 0.80 \times \frac{100}{520} + 1.20 \times \frac{120}{520} + 1.50 \times \frac{160}{520} = 1.104$$

As per CAPM

$$= 0.08 + 1.104(0.10 - 0.08) = 0.10208 \text{ i.e. } 10.208\%$$

- (ii) As computed above the expected return from Better is 10% same as from Nifty, hence there will be no difference even if the replacement of security is made. The main logic behind this neutrality is that the beta of security 'Better' is 1 which clearly indicates that this security shall yield same return as market return.

Answer 6:

(A)

Although there are many constituents for IFC but some of the important constituent are as follows:

- (i) Highly developed Infrastructure: - A leading edge infrastructure is prerequisite for creating a platform to offer internationally complete financial services.
- (ii) Stable Political Environment: - Destabilized political environment brings country risk investment by foreign nationals. Hence, to accelerate foreign participation in growth of financial center, stable political environment is prerequisite.
- (iii) Strategic Location: - The geographical location of the finance center should be strategic such as near to airport, seaport and should have friendly weather.
- (iv) Quality Life: - The quality of life at the center should be good as center retains highly paid professional from own country as well from outside.
- (v) Rationale Regulatory Framework: - Rationale legal regulatory framework is another prerequisite of international finance center as it should be fair and transparent.
- (vi) Sustainable Economy: - The economy should be sustainable and should possess capacity to absorb all the shocks as it will boost investors' confidence.

(B)

(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%	<u>1,602.41</u>
Net amount received	7,99,603.69
Less: Short term capital gain tax @ 10% on 1,144.43 (53.64* – 48.10 ≈) = 6,340	<u>634</u>
Net of tax	7,98,969.69
Less: Investment	<u>1,00,000.00</u>
	<u>6,98,969.69</u>

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

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

(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%	<u>1,723.50</u>
Net amount received	8,60,026.50
Less: Short term capital gain tax @ 10% 7,500 x (22.93† – 19.95) = 22,350	<u>2,235.00</u>

Net of tax	8,57,791.50
Less: Investment	<u>1,00,000.00</u>
Net gain	<u>7,57,791.50</u>

† (22.98 – STT @ 0.2%)

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

(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

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

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.

(c)

- (i) It enables reservation of certain items for exclusive manufacture of MSME enterprises. It helps them to protect their interest.
- (ii) This policy helps in generating employment for the people and consequently, enhances the standard of living of people.
- (iii) To encourage the small scale units, SEZ's are required to allocate 10% space for small scale units.
- (iv) Under the MSME act, protections are offered in relation to timely payment by buyers to MSME's.
- (v) Assistance is also available in obtaining finance; help in marketing; technical guidance; training and technology upgradation, etc.
- (vi) Further, an enterprise, whose post-issue face value does not exceed Rs. 25,00,00,000 (Rupees Twenty Five Crores only), is entitled to obtain certain exemptions from the

eligibility requirements under the ICDR Regulation.