

Paper 14- Advanced Financial Management

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Full Marks: 100

Time allowed: 3 Hours

Sec-A

Answer Question No. 1 which is compulsory Carries 20 Marks.

1. (A) Each Question carries 2 Marks

[7×2=14]

- (i) When are call options and put options said to be 'At the money' in the Options market?
- (ii) It is given that Rupee/ £ quote is ₹ 100 – ₹104 and that ₹/\$ quote is ₹50 – ₹52. What would be the \$/£ quote?
- (iii) A safety mutual fund that had a net asset value of ₹ 20 at the beginning of a month, made income and capital gain distribution of ₹0.06 and ₹0.04 respectively per unit during the month and then ended the month with a net asset value of ₹20.25. Calculate the monthly return?
- (iv) Mr. Ravi is planning to purchase the shares of X Ltd. which had paid a dividend of ₹2 per share last year. Dividends are growing at a rate of 10%. What price would Mr. Ravi be willing to pay for X Ltd.'s shares if he expects a rate of return of 20%?
- (v) Z Ltd's equity beta is 1.5, Market gives a return of 18% for the year. Risk-free Rate of Interest is 10%. Z Ltd gives a return of 24% for the year, compute the Alpha of Z Ltd?
- (vi) Compute the Profitability Index of a Project which has the following NPV Distribution.

NPV Amount ₹	Probability
1,25,000	0.3
2,00,000	0.4
2,45,000	0.3

The Project involves Cash-outflow of ₹ 5,00,000.

(vii) What do you mean by Repo Rate?

1. (B) State if each of the following sentences is T (= true) or F (= false), Each Question carries 1 Mark: [6×1=6]

- (i) Beta indicates the unsystematic risk of a security.
- (ii) Cap and floor are Interest Rate Options.
- (iii) Forward is Standardized future contract.
- (iv) The difference between the Bid Rate and Ask rate is known as Spread.
- (v) American options can be exercised only on expiry date.
- (vi) In Capital Budgeting the NPV and IRR techniques always give the same results under all the circumstances.

Answers:

1(A).

- (i) When the Asset (share) price is same as the exercise (strike) price, the option is said to be at the money.
- (ii) The rate for \$/£ is to be calculated.

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

The formula is –

$$\$/\text{₹} = \frac{\text{Re}/\text{₹}_{\text{bid}}}{\text{Re}/\text{\$}_{\text{ask}}} : \frac{\text{Re}/\text{₹}_{\text{ask}}}{\text{Re}/\text{\$}_{\text{bid}}} = 100/52 : 104/50$$
$$= 1.923 : 2.08$$

(iii) Capital Appreciation = Closing NAV – Opening NAV = ₹20.25 – ₹20 = ₹0.25

Total return = Capital Appreciation + Income + Capital Gain = 0.25 + 0.06 + 0.04 = ₹0.35

Monthly Return = Total Return/Opening NAV = 0.35/20 = 0.0175 = 1.75%

(iv) $P_0 = D_1 / (K_e - g)$ $D_1 = D_0(1+g) = 2(1+0.10) = ₹2.20$

$$P_0 = 2.20 / (0.20 - 0.10) = ₹22.$$

(v) CAPM Model

$$E[RP] = R_F + B \times [R_M - R_F]$$

$$= 10\% + 1.5(18-10)\% = 22\%$$

Alpha = Actual Return - CAPM required Return

$$= 24\% - 22\% = 2\%$$

(vi) Expected NPV = ₹[125000X(0.3) + 200000X(0.4) + 245000X(0.3)]

$$= ₹[37500 + 80000 + 73500] = ₹191000$$

Cash outflow = ₹500000

P.V of cash Inflow = P.V. Of cash outflow + NPV

$$= ₹500000 + ₹191000 = ₹691000$$

PI = P.V of cash Inflow / P. V of Cash Outflow = ₹691000 / ₹500000 = 1.382

(vii) Repo (Repurchase) rate also known as the benchmark interest rate is the rate at which the RBI lends money to the banks for a short term. When the repo rate increases, borrowing from RBI becomes more expensive. If RBI wants to make it more expensive for the banks to borrow money, it increases the repo rate similarly, if it wants to make it cheaper for banks to borrow money it reduces the repo rate.

1(B).

- (i) False
- (ii) True
- (iii) False
- (iv) True
- (v) False
- (vi) False

Sec-B

Answer any 5 Questions from the following. Each Question carries 16 Marks.

2. (a) X Ltd. an existing profit making company, is planning to introduce a new product with a projected life of 8 years initial equipment cost will be ₹ 120 lakhs and additional equipment

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

costing ₹ 10 lakhs will be needed at the beginning of third year. At the end of the 8 years, the original equipment will have resale value equivalent to the cost of removal, but the additional equipment would be sold for ₹ 1 lakhs. Working Capital of ₹15 lakhs will be needed. The 100% capacity of the plant is of 4,00,000 units per annum, but the production and sales volume expected are as under:

Year	Capacity in percentage
1	20
2	30
3-5	75
6-8	50

A sale price at of ₹ 100 per unit with a profit volume ratio of 60% is likely to be obtained. Fixed Operating Cash Cost are likely to be ₹ 16 lakhs per annum. In addition to this the advertisement expenditure will have to be incurred as under:

Year	1	2	3-5	6-8
Expenditure in ₹ in Lakhs each year	30	15	10	4

The company is subject to 40% tax. Assuming straight-line method of depreciation is permitted under tax laws and taking 15% as appropriate after tax Cost of Capital, should the project be accepted? [10]

2. (b) Determine the risk adjusted net present value of the following projects:

	A	B	C
Net cash outlays (₹)	1,00,000	1,20,000	2,10,000
Project life	5 years	5 years	5 years
Annual cash inflow (₹)	30,000	42,000	70,000
Coefficient of variation	0.4	0.8	1.2

The company selects the risk-adjusted rate of discount on the basis of the co-efficient of variation:

Coefficient of variation	Risk adjusted rate of discount	Present value factor 1 to 5 years at risk adjusted rate of discount
0.0	10%	3.791
0.4	12%	3.605
0.8	14%	3.433
1.2	16%	3.274
1.6	18%	3.127
2.0	22%	2.864
More than 2.0	25%	2.689

[6]

Answers:

2(a) Computation of initial cash outlay

	(₹ in lakhs)
Equipment Cost (0)	120
Working Capital (0)	<u>15</u>
	<u>135</u>

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

Calculation of Cash Inflows:

Year	1	2	3-5	6-8
Sales in units	80,000	1,20,000	3,00,000	2,00,000
Contribution @ ` 60 p.u.	48,00,000	72,00,000	1,80,00,000	1,20,00,000
Fixed cost	16,00,000	16,00,000	16,00,000	16,00,000
Advertisement	30,00,000	15,00,000	10,00,000	4,00,000
Depreciation	15,00,000	15,00,000	16,50,000	16,50,000
Profit/(loss)	(13,00,000)	26,00,000	1,37,50,000	83,50,000
Tax @ 40%	Nil	10,40,000	55,00,000	33,40,000
Profit/(loss) after tax	(13,00,000)	15,60,000	82,50,000	50,10,000
Add: Depreciation	15,00,000	15,00,000	16,50,000	16,50,000
Cash Inflow	2,00,000	30,60,000	99,00,000	66,60,000

Computation of PV of CIF

Year	CIF	PV Factor @ 15%	
	₹		₹
1	2,00,000	0.8696	1,73,920
2	30,60,000	0.7561	23,13,666
3	99,00,000	0.6575	65,09,250
4	99,00,000	0.5718	56,60,820
5	99,00,000	0.4972	49,22,280
6	66,60,000	0.4323	28,79,118
7	66,60,000	0.3759	25,03,494
8	66,60,000	0.3269	21,77,154
WC	15,00,000	0.3269	4,90,350
SV	(1,00,000)	0.3269	(32,690)
			2,75,97,362
		PV of COF ₀	1,35,00,000
	Additional Investment = ₹ 10,00,000 × 0.7561		7,56,100

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

	NPV	1,33,41,262
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Recommendation: Accept the project in view of positive NPV.

2(b) Statement showing the determination of the risk adjusted net present value

Projects	Net cash outlays	Coefficient of variation	Risk adjusted discount rate	Annual cash inflow	PV factor 1-5 years at risk adjusted rate of discount	Discounted cash inflow	Net present value
	₹			₹	₹	₹	₹
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)=(v) x (vi)	(viii) = (vii) - (ii)
A	1,00,000	0.4	12%	30,000	3,605	1,08,150	8,150
B	1,20,000	0.8	14%	42,000	3,433	1,44,186	24,186
C	2,10,000	1.20	16%	70,000	3,274	2,29,180	19,180

3. (a) The returns on Stock A and Market Portfolio for a period of 6 years are as follows:

Year	Return on Security A in %	Return on Market Portfolio (%)
1	10	8
2	17	10
3	13	13
4	2	-4
5	10	11
6	-10	-2

You are required to determine the a) Characteristic line for stock A b) Systematic and Unsystematic risk of Stock A. [8]

3. (b) Investor's weekly, a News Magazine on the happenings at Cloudy Street, publishes the following information in its November 2015 Edition for Security PQR: Equilibrium return=20%, Market portfolio return=20%, The market price of the 6% Treasury Bills (₹100) at 120. Covariance of Security with market portfolio = 225% and correlation = 0.85. Determine the risk of the market portfolio and Security Risk. [8]

3(a). (i) Characteristic Line for security A = $Y = a + Bx$

CALCULATION OF BETA OF SECURITY

Period	Return of		Deviation from Mean		Variance		Co-Variance of $DM \times DA$
	Market Portfolio (R_m)	Security A (R_A)	Market (D_m) ($R_m - R_m$)	A (D_A)	Market DM^2	DA^2	
1	8	10	2	3	4	9	6
2	10	17	4	10	16	100	40
3	13	13	7	6	49	36	42
4	-4	2	-10	-5	100	25	50
5	11	10	5	3	25	9	15

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

6	-2	-10	-8	-17	64	289	136
	$\Sigma=36$	$\Sigma=42$	$\Sigma=0$	$\Sigma=0$	$\Sigma DM^2=258$	$\Sigma D^2A=468$	$\Sigma DM \times DA=289$

Mean	Market Portfolio	Share Company
$\left(\frac{\Sigma RM}{N} \text{ Or } \frac{\Sigma RA}{N} \right)$	$= \frac{36}{6} = 6$	$\frac{42}{6} = 7$
Variance (σ^2)	$\frac{258}{6} = 43$	$\frac{468}{6} = 78$
$(\sigma_m^2 = \Sigma DM^2 \div n)$		
Standard Deviation	$\sqrt{43}$	$\sqrt{78}$
(σ)	$= 6.56$	$= 8.83$
Covariance (MA)	$= \Sigma(DM \times DA) \div n$	
	$289 \div 6 = 48.167$	

$$\beta = \text{CovMA} \div \sigma_m^2 = 48.167 \div 43 = 1.12$$

$$\text{Correlation} = \frac{\text{COVMA}}{\sigma_M \times \sigma_A} = \frac{48.167}{6.56 \times 8.83} = 0.8316$$

Characteristic line for stock: A

$$7 = a + 1.12 \times 6$$

$$a = 7 - 6.72 \quad \text{or} \quad a = 0.28$$

$$y = 0.28 + 1.12x$$

(ii)

Systematic Risk	Variance Approach	Standard Deviation Approach
	$49\% \times 0.8316^2 = 33.76\%$	$8.83 \times 8.3 = 7.33\%$
Unsystematic Risk	$49 \times (1 - 83^2) = 15.19$	$8.83 \times (1.83) = 1.501$
Total Risk	49%	7.00%

3(b) Risk free rate = Coupon payment/Current market price = [$\text{₹}100 \times 6\%$]/ $\text{₹}120 = 5\%$

Equilibrium return = CAPA return; $20\% = R_f + \text{BETA} \times (R_M - R_f)$; OR, $20\% = 5\% + \text{BETA} \times (20\% - 5\%)$;

$\therefore \text{Beta} = 1$. Market Risk : $\text{Beta}_d = \text{Cov}_{dm} / \sigma_m^2$ or, $1 = (225\%) / \sigma_m^2$ or, $\sigma_m = 15\%$;

Security risk = $\text{Beta}_d = [\sigma_d / \sigma_m] \times \sigma_{dm}$; or, $1 = [\sigma_d / 15\%] \times 0.85$; or, $\sigma_d = 17.65\%$

4. (a)

BSE Index	25000
Value of portfolio	₹50,50,000
Risk free interest rate	9% p.a.
Dividend yield on Index	6% p.a.
Beta of portfolio	2

We assume that a future contract on the BSE index @ 50 Units per contract with four months maturity is used to hedge the value of portfolio over next three months. One future contract is for delivery of 50 times the index.

Based on the above information calculate:

- i) Price of future contract. (ii) The gain on short futures position if index turns out to be 22500 in three months [8]

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

4. (b) The current price (in Dec 2015) of sugar is ₹40 per kg. Sugar Mill SM expects to produce 200 MT of sugar in February 2016. February futures contract due on 20th February is trading at ₹ 45 per kg. SM wants to hedge itself against a price decline to below ₹45 kg in February. 100% cover is required and each contract is for 10 MT.

- (i) Explain SM's appropriate hedging measure showing cash flows for full value if the price falls to ₹42 per kg in February 2016.
 (ii) What is the position of SM in the futures and in the spot market? [8]

Answers:

4(a) Tenor / time period (t) in years = 4 months or 0.3333 years.

- (i) Risk free interest rate @ = 9% or 0.09

Price of future contract

$$\begin{aligned} (TFP_x) &= S_x \times e^{(r - y) \times t} \\ &= ₹ 25000 \times e^{(0.09 - 0.06) \times 0.3333} \\ &= ₹ 25000 \times 0.03 \times 0.3333 \\ &= ₹ 25000 \times e^{0.01} = ₹ 25000 \times 1.010 \\ &= ₹ 25250 \end{aligned}$$

Therefore, price of futures contract is ₹ 25,250.

Gain on short Future Position

No. of contracts to be entered into Portfolio Value ₹ 5050000

4 month's future price per unit of BSE index ₹ 25250

No. of units per BSE Index future contract 50

Value per BSE Index future contract (50 units × 25250 Per Unit) = 12,62,500

No. of contract to be entered (5050000 × 2.00 ÷ 1262500) = 8 Contracts

Contract sale price per unit	₹ 25,250
Less: Index Position in 3 months	₹ 22,500
Gain per unit of BSE Index Future	₹ 2,750

No. of unit per contract 50

Gain per contract ₹ 2,750 × 50 units = ₹ 1,37,500

4(b) Quantity to be hedged = $\frac{200 \text{ MT}}{10} = 20$ futures

Hedging Strategy:

Sell 20 futures in Dec 15 : 20×10×45×1000	₹90,00,000
Buy futures in Feb 16 : 20×10×42×1000	₹84,00,000
Gain in Future Market (A)	₹6,00,000
Price in Spot Market : 20×10×42×1000 (B)	₹84,00,000
Effective price realized [A+B]	₹90,00,000

SM's position in futures market is short and since SM holds the underlying asset, it is long in the spot market.

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

5. (a) PS Fund invests exclusively in Public sector undertakings, yielded ₹4.85 per unit for the year. The opening NAV was ₹26.85. The Fund has a risk factor of 3.50%. Ascertain the Sharpe Ratio and compare the fund performance with market performance if

- (i) Risk Free Return is 6%, if return on Sensex is 16% with a standard deviation of 3.75%.
 (ii) Risk Free Return is 5%, return on Sensex is 18% with a standard deviation of 4%. [8]

5. (b) Mr. G, on 01.07.2013, during the initial offer of some mutual fund invested in 20,000 units having face value of ₹20 per unit. On 31.03.2014, the dividend operated by the Mutual Fund was 10% and Mr. G found that his annualized yield was 153.33%. On 31.03.2015, 20% dividend was given. On 31.03.2016, Mr. G redeemed all his balance of 22,600 units when his annualized yield was 73.52%. What is the Net Asset Value (NAV) as on 31.03.2016? [8]

Answers:

5(a) Sharpe Ratio = $(R_P - R_f) / \sigma_P$

Where R_P = Return on portfolio

R_f = Risk free Return

σ_P = Standard Deviation of portfolio

Particulars	Case I	Case II
Risk free return R_f	6%	5%
Market Return (R_M)	16%	18%
Standard Deviation of market return (σ_m)	3.75%	4.00%
Sharpe Ratio for N Fund $\{(R_P - R_f) \div \sigma_P\}(A)$	18.06% - 6% ÷ 3.50 = 3.45	18.06% - 5% ÷ 3.50% = 3.73
Sharpe Ratio for Market Return $\{(R_m - R_f) \div \sigma_m\}(B)$	16% - 6% ÷ 3.75% = 2.67	18% - 5% ÷ 4% = 3.25
Sharpe Ratio is higher for	PS Fund	PS Fund
Inference / Evaluation	PS Fund has outperformed market's performance	PS Fund has outperformed

Return on PS Fund = yield ₹ 4.85 ÷ Opening NAV ₹ 26.85 = 18.06%

5(b)

Yield for 9 months = 153.33% × 9/12 = 115%.

Market value of investments as on 31.03.2014 = ₹4,00,000 + (₹4,00,000 × 115%) = ₹8,60,000.

Therefore, NAV as on 31.03.2014 = (₹ 8, 60,000 – ₹40,000) / 20,000 = ₹41.

[NAV would stand reduced to the extent of dividend payout, being ₹ 20,000 × ₹20 × 10% = ₹40,000.]

Since dividend was reinvested, additional units acquired = ₹ 40,000 / ₹41 = 975.61 units.

Therefore, units as on 31.03.2014 = 20,000 + 975.61 = 20,975.61 units.

[Alternatively, units as on 31.03.2014 = ₹ 8,60,000 / ₹41 = 20,975.61 units.]

Dividend as on 31.03.2015 = 20,975.61 × ₹20 × 0.2 = ₹ 83,902.44.

Let X be the NAV as on 31.03.2015, then no. of new units reinvested will be ₹83,902 / X Accordingly, 22,600 units shall consist of reinvested units and 20,976 units (as on 31.03.2014).

Thus by way of equation: 22,600 units = [₹ 83,902 / X] + 20,976 units.

Therefore, NAV as on 31.03.2015 = X = ₹ 83,902 / 1,624 units = ₹ 51.66.

NAV as on 31.03.2016 = [₹ 4,00,000 (1 + 0.7352 × {33 / 12})] / 22,600 units = ₹53.48.

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

6. (a) Nihar, a foreign exchange dealer, is actively engaged in simultaneously buying and selling same foreign currencies to make guaranteed profit.

The rates prevailing in the market are as follows: Spot rate: ₹ 65.80 / \$

3 months forward rate : ₹ 66.40/\$. The interest rates in India is 7% Per Annum and Interest rate in USA is 11% Per Annum. Discuss the possibility of a net gain in arbitrage if Nihar's borrowing potential is limited to 100 Million Rupees. [8]

6. (b) The following information is available for Call option on the stock of MACON LTD. Current market price ₹415, Strike price ₹400, Time to expiration (1 year = 360 days). Standard deviation of return 22%, and Risk-free rate of interest is 5%.

You are required to compute the value of Call option, using Black- Scholes model. [Given: $N(d_1) = N(0.5033) = 0.7019$; $N(d_2) = N(0.3933) = 0.6628$; $\ln(1.0375) = 0.03681$; and $e = 2.71828$]. [8]

Answers:

- 6(a) 3 month forward rate of dollar is higher (at ₹ 66.40) than the spot rate (₹ 65.80). It implies that the dollar is at premium.

$$\text{Premium (\%)} = \frac{\text{₹ } 66.40 - \text{₹ } 65.80}{65.80} \times \frac{12}{3} \times 100 = 3.647 \text{ or } 3.65\% \text{ P.a.}$$

$$\text{Interest rate differential} = 11\% - 7\% = 4\% \text{ p.a.}$$

Since the interest rate differential (4%) and premium (3.65%) do not match, there are arbitrage gain possibilities. An arbitrageur (Nihar) can take the following steps in this regard:

- (i) Nihar (arbitrageur) borrows, say ₹ 100 million at 7% for 3 months (as ₹ carries lower interest rate)
- (ii) He then converts ₹ 100 million in US \$ at the spot rate of ₹ 65.80 in the spot market. He gets an amount of US \$ 1519757 (i.e. $100,000,000/65.80 = 1519756.839$ or 1519757)
- (iii) He invests US \$ 1519757 in the US money market at 11% interest p.a. for 3 months and he obtains interest of US \$ 41793 ($\$ 1519757 \times \frac{3}{12} \times \frac{11}{100}$)
- (iv) Total sum available with arbitrageur, 3 months from now is (US \$1519757 + \$41793) = US \$1561550.
- (v) Since he would get US \$1561550 after 3 months, he sells forward US \$ 1561550 at the rate of ₹ 66.40.
- (vi) As a result of forward deal, at the end of 3 months from now, he would get ₹ 103686920, i.e. ($\$ 1561550 \times 66.40$)
- (vii) He refunds ₹ 100 million borrowed, along with interest due on it. The refunded sum is ₹ 100,000,000 + ₹ 1750,000 i.e. ($\text{₹ } 100,000,000 \times \frac{3}{12} \times \frac{7}{100}$) ₹ 101750000.
- (viii) Net gain is ₹ 103686920 – 101750000 = ₹ 1936920

$$6(b) d_1 = [\ln(S/x) + (r + 0.5\sigma^2)]/\sigma\sqrt{t}$$

$$= [\ln(415/400) + (0.05 + 0.5 \times 0.22^2) \times 0.25] / [0.22 \times \sqrt{0.25}]$$

$$= [\ln(1.0375) + 0.01855] / 0.11 = [\ln(0.03681) + 0.01855] / 0.11 = 0.05536 / 0.11 = 0.5033$$

$$d_2 = d_1 - \sigma\sqrt{t} = 0.5033 - [0.22 \times \sqrt{0.25}] = 0.5033 - 0.1100 = 0.3933$$

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

So, $N(d_1) = N(0.5033) = 0.7019$; AND $N(d_2) = N(0.3933) = 0.6628$

Hence, value of call option = $S \times N(d_1) - [X \times e^{-rt} \times N(d_2)]$

= $[415 \times 0.7019] - [400 / (2.71828)^{0.05 \times 0.25} \times 0.6628]$

= $[291.2885] - [400 / 1.01258 \times 0.6628] = [291.2885] - [261.8266] = 29.46$

7. (a) K Ltd. has the following capital structure as per its Balance Sheet as at 31st March, 2016.

Particulars	Amount Lakh ₹
Equity Capital (₹10 Shares)	4
18% Preference Capital (₹ 100 Per Share)	3
Retained Earnings	1
12.5% Debentures	8
12% Term Loan	4

Additional Information:

- (i) The current market price of the company's equity share is ₹64.25. The dividend expected on the equity share at the end of year is at 80% which is expected to grow @ 5 % p.a. forever.
- (ii) The preference shares of the company which are redeemable after 10 years are currently selling at ₹ 90 per share.
- (iii) The debentures are redeemable after 5 years and are currently quoted at ₹95 Per debenture
- (iv) The Tax Rate is 30%

Calculate the weighted average cost of capital using market value weights. [8]

7. (b) Discuss the factors that 'Credit Rating' does not measure? [8]

Answers:

7(a) Statement showing the weighted average cost of capital (using market value weight):

Source of capital A	Amount of each source of capital (In lakhs) B	Proportion of each source of capital C	After tax cost of each sources of capital D	Product E = C × D
Equity share capital	₹25.70	0.6425 (i. e., 25.7/40)	0.1745	0.1121
18% preference share capital	₹2.70	0.0675 (i.e., 2.7/40)	0.2000	0.0135
12.5% Debenture	₹7.60	0.1900 (i. e., 7.6/40)	0.1000	0.0190
12% Term Loan	₹4.00	0.1000 (i/e., 4/40)	0.0840	0.0084
	₹40.00			0.1530

Therefore, Weighted average cost of capital = 0.1530 or 15.3%

Working Notes:

- (i) Cost of Equity share capital (k_e) = $[D_1/P_0] + g = [₹8 / (₹64.25)] + 0.05 = 0.1745$ or 17.45%
- (ii) Cost of Retained earnings (k_r) = $k_e = 17.45\%$
- (iii) Cost of 18% Preference share capital (k_p):

$$= \frac{\text{Preference dividend} + (\text{Redeemable value} - \text{Net sale proceeds}) / N}{(\text{Redeemable value} + \text{Net sale proceeds}) / 2}$$

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

$$\begin{aligned} &= \frac{₹18 + (₹100 - ₹90) / 10}{(₹100 + ₹90) / 2} \\ &= \frac{₹18 + ₹1}{₹95} = 0.20 \text{ or } 20\% \end{aligned}$$

(iv) Cost of 12.5% Debentures (k_d):

$$\begin{aligned} &= \frac{\text{Interest} (1 - \text{tax rate}) + (\text{Redeemable value} - \text{Net sale proceeds}) / N}{(\text{Redeemable value} + \text{Net sale proceeds}) / 2} \\ &= \frac{₹12.5(1 - 0.3) + (₹100 - ₹95) / 5}{(₹100 + ₹95) / 2} \\ &= \frac{₹8.75 + ₹1}{₹97.5} = 0.10 \text{ or } 10\% \end{aligned}$$

(v) Cost of 12% Term Loan:

$$\begin{aligned} &= \frac{\text{Interest} (1 - \text{tax rate})}{\text{Net sale proceeds}} \\ &= \frac{₹48,000 (1 - 0.30)}{₹4,00,000} = 0.084 \text{ or } 8.4\% \end{aligned}$$

7(b) Credit Rating do not measure the following-

- i) Investment Recommendation: Credit Rating does not make any recommendation on whether to invest or not.
- ii) Investment Decision: They do not take into account the aspects that influence an investment decision.
- iii) Issue Price: Credit Rating does not evaluate the reasonableness of the issue price, possibilities for capital gains or liquidity in the secondary market.
- iv) Risk of Prepayment: Ratings do not take into account the risk of prepayment by issuer, or interest or exchange risks.
- v) Statutory Compliance: Credit Rating does not imply that there is absolute compliance of statutory requirements in relation to Audit, Taxation, etc. by the issuing company.

8. Write a short note on any four of the following:

[4×4=16]

- (a) Book Building system
- (b) Money Market VS Capital Market
- (c) Depository system in India
- (d) Hedge Funds
- (e) Forward Market Commission

Answers:

8(a). Book-building means a process by which a demand for the securities proposed to be issued by a body corporate is elicited and built up and the price for such securities is assessed for the determination of the quantum of such securities to be issued by means of notice/ circular / advertisement/ document or information memoranda or offer document. It is a mechanism where, during the period for which the book for the offer is open, the bids are collected from investors at various prices, which are within the price band specified by the issuer. The process is directed towards both the institutional as well as the retail investors. The issue price is determined after the bid closure based on the demand generated in the process.

Advantages of Book Building Process:

- (i) The book building process helps in discovery of price & demand.
- (ii) The costs of the public issue are much reduced.
- (iii) The time taken for the completion entire process is much less than that in the

Answer to MTP_Final_Syllabus 2012_December 2016_Set1

normal public issue.

- (iv) In book building the demand for the share is known before the issue closes. In fact, if there is not much demand, the issue may be deferred.
- (v) It inspires investor's confidence leading to a large investor universe.
- (vi) Issues can choose investors by quality.
- (vii) The issue price is market determined.

(b) Differences between Capital Market and Money Market

Aspect	Capital Market	Money Market
(i) Type of Investment	Debt and Equity Instruments. e.g., Equity Shares, Preference shares, Debentures, Zero Coupon Bonds.	Debt Instruments only. e.g., Treasury Bills, Commercial Papers, Commercial Bills, Certificate of Deposits.
(ii) Participants	Retail Investors, Institutional Investors (Mutual Funds), Financial Institutions, etc.	Bankers, Financial Institutions, Reserve Bank of India, Government.
(iii) Regulator	SEBI	RBI
(iv) Risk	Low Credit and Market Risk involved.	High Credit and Market risk.

(c) Depository System in India

A depository is an organisation which holds securities (like shares, debentures, bonds, government securities, mutual fund units etc.) of investors in electronic form at the request of the investors through a registered Depository Participant. It also provides services related to transactions in securities. At present two Depositories viz. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) are registered with SEBI.

Need for Setting-up a Depository in India:

The need was realized in the 1990s due to various reasons as under:

- ❖ A lot of time was consumed in the process of allotment and transfer of shares
- ❖ Increase in volume of transactions
- ❖ Large scale irregularities in the securities scam of 1992 exposed the limitations of the prevailing settlement system
- ❖ Problems associated with dealing in physical shares, such as
 - ✓ problems of theft, fake and/or forged transfers,
 - ✓ share transfer delays particularly due to signature mismatches; and
 - ✓ paper work involved in buying, selling, and transfer leading to costs of handling, storage, transportation, and other back office costs.

To overcome these problems, the Government of India, in 1996, enacted the Depositories Act, 1996 to start depository services in India.

(d) Hedge Funds

Hedge funds refer to funds that can use one or more alternative investment strategies, including hedging against market downturns, investing in asset classes such as currencies or distressed securities, and utilizing return-enhancing tools such as leverage, derivatives, and arbitrage. It can take both long and short positions, use arbitrage, buy and sell undervalued securities, trade options or bonds, and invest in almost any opportunity in any market where it foresees impressive gains at reduced risk.

Key Characteristics of Hedge Funds

- Hedge funds utilize a variety of financial instruments to reduce risk, enhance returns and minimize the correlation with equity and bond markets. Many hedge funds are flexible in their investment options (can use short selling, leverage, derivatives such as puts, calls, options, futures, etc.).
- Hedge funds vary enormously in terms of investment returns, volatility and risk. Many, but not all, hedge fund strategies tend to hedge against downturns in the markets being traded.
- Many hedge funds have the ability to deliver non-market correlated returns.
- Many hedge funds have as an objective consistency of returns and capital preservation rather than magnitude of returns.
- Most hedge funds are managed by experienced investment professionals who are generally disciplined and diligent.
- Pension funds, endowments, insurance companies, private banks and high net worth individuals and families invest in hedge funds to minimize overall portfolio volatility and enhance returns.
- Most hedge fund managers are highly specialized and trade only within their area of expertise and competitive advantage.
- Hedge funds benefit by heavily weighting hedge fund managers' remuneration towards performance incentives, thus attracting the best brains in the investment business. In addition, hedge fund managers usually have their own money invested in their fund.
- Performance of many hedge fund strategies, particularly relative value strategies, is not dependent on the direction of the bond or equity markets -- unlike conventional equity or mutual funds (unit trusts), which are generally 100% exposed to market risk .

The popular misconception is that all hedge funds are volatile -- that they all use global macro strategies and place large directional bets on stocks, currencies, bonds, commodities, and gold, while using lots of leverage. In reality, less than 5% of hedge funds are global macro funds. Most hedge funds use derivatives only for hedging or don't use derivatives at all, and many use no leverage.

(e) Forward Market Commission

The Forward Markets Commission is a regulatory body for commodity markets in India. The forward contracts in commodities are regulated as per F.C.(R) Act, 1952 by this body. Inherent objective is to achieve price stability by means of price discovery and risk management. The Commission also collects information regarding the trading conditions in respect of goods to which any of provisions of Act is made applicable. It also advises Central Government regarding recognition of associations.

Functions of Forward Market Commission of India

(i) To advise the Central Government in respect of the recognition or withdrawal of recognition from any association. It also advises government about any other matter arising out of the administration of this act.

(ii) Second function of the act includes the task of keeping forward market s under observation and take necessary actions. The actions taken should be according to powers given to the commission by the "Forward Contract Regulation Act".

(iii) To collect information regarding the trading conditions in respect of goods (to which any of the provisions of this Act is made applicable) including information regarding supply, demand and prices. And publish information whenever the Commission thinks it necessary, It also performs the task of submitting to the Central Government periodical reports on the operation of this Act and on the working of forward markets relating to such goods.

(iv) To make recommendations generally with a view to improving the organization and working of forward markets

(v) To undertake the inspection of the accounts and other documents of [any recognized association or registered association or any member of such association] whenever it considers it necessary.

(vi) To perform such specified duties and exercise assigned powers by the "Forward Contract Regulation Act".

