

Paper – 14 – Strategic Financial Management

Paper – 14 – Strategic Financial Management

Full Marks : 100

Time allowed: 3 hours

Answer Question No. 1 which is compulsory and carries 20 marks and any five from Question No. 2 to 8.

SECTION – A [20 marks]

1. Choose the correct option among four alternative answer. (1 marks for correct choice, 1 mark for justification.) [10×2=20]

- (i) 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. The monthly return is:
- (A) 2.25%
(B) 1.75%
(C) 1.25%
(D) 1.65%
- (ii) 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%?
- (A) ₹22
(B) ₹24
(C) ₹20
(D) ₹21
- (iii) The spot price of securities of X Ltd. is ₹160. With no dividend and no carrying cost, compute the theoretical forward price of the securities for 1 month. You may assume a risk free interest rate of 9% p.a.
- (A) ₹160
(B) ₹162.75
(C) ₹161.20
(D) ₹159.20
- (iv) It is given that ₹/£ quote is ₹94.30 – 95.20 and that ₹/\$ quote is 66.25 – 66.45. What would be the \$/£ quote?
- (A) 1.42:1.44
(B) 1.44:1.42
(C) 1.44:1.52
(D) 1.52:1.44

MTP_Final_Syllabus 2016_Jun2017_Set 1

- (v) When are call options and put options said to be 'in the money' in the futures market?
- (A) In call options when strike price is above the price of underlying futures, call option is 'in the money'. In put options, when the strike price is below the price of underlying futures put option 'is in the money'
- (B) In call options when strike price is below the price of underlying futures, call option is 'in the money'. In put options, when the strike price is above the price of underlying futures put option 'is in the money'
- (C) None of the above
- (D) Both the above.
- (vi) A firm has an equity beta of 1.40 and is currently financed by 25% debt and 75% equity. What will be the company's equity beta if the company changes its financing policy to 33% debt and 67% equity? [Assume corporate tax at 35% and zero debt beta]
- (A) 1.62
- (B) 1.72
- (C) 1.42
- (D) 1.52
- (vii) XYZ Ltd. has a uniform income that accrues in a 4-year business cycle. It has an average EPS of ₹ 20 (per share of ₹ 100) over its business cycle. Find out the cost of equity capital, if market price is ₹ 175.
- (A) 11.43%
- (B) 12.43%
- (C) 10.43%
- (D) 13.43%
- (viii) Following information is available regarding a mutual fund:
- | | |
|-------------------|------|
| Return | 13 |
| Risk (σ) | 16 |
| Beta (β) | 0.90 |
| Risk free rate | 10 |
- Calculate Sharpe ratio.
- (A) 0.18
- (B) 0.16
- (C) 0.19
- (D) 0.17
- (ix) Compute the theoretical forward price of the following security for 6 months.
- | | |
|-------------------------|------|
| Spot Price (S_x) | ₹160 |
| Risk free interest rate | 9% |
- [Given: $e^{0.045} = 1.046028$]
- (A) ₹168.3645

MTP_Final_Syllabus 2016_Jun2017_Set 1

(B) ₹ 167.3645

(C) ₹166.3645

(D) ₹165.3645

- (x) A project had an equity beta of 1.3 and was going to be financed by a combination of 30% debt and 70% equity. Assuming debt-beta to be zero, calculate the project beta and return from the project taking risk free rate of return to be 10% and return on market portfolio of 18%.

(A) 14.28%

(B) 17.28%

(C) 15.28%

(D) 16.28%

SECTION - B [80 marks]

Answer any 5 questions from this section

- (2) (a)** VEDAVYAS Ltd. is considering two mutually exclusive projects M and project N. The Finance Director thinks that the project with higher NPV should be chosen, whereas the Managing Director thinks that the one with the higher IRR should be undertaken, especially as both projects have the same initial outlay and length of life. The company anticipates a cost of capital of 10% and the net after-tax cash flow of the projects are as follows:

Year	0	1	2	3	4	5
Cash flows (₹)						
Project M	(4,00,000)	70,000	1,60,000	1,80,000	1,50,000	40,000
Project N	(4,00,000)	4,36,000	20,000	20,000	8,000	6,000

You are required to:

- (i) Calculate the NPV and IRR of each project.
- (ii) State with reasons, which project you would recommended.
- (iii) Explain the inconsistency in the ranking of the two projects.

Present value Table is given :

Year	0	1	2	3	4	5
PVIF at 10%	1.000	0.909	0.826	0.751	0.683	0.621
PVIF at 20%	1.000	0.833	0.694	0.579	0.482	0.402

[5+2+1=8]

- (b)** A firm has an investment proposal requiring an outlay of ₹1,92,000. The Investment proposal is expected to have two years economic life with no salvage value. In year-end 1, there is a 0.4 probability that cash inflow after tax will be ₹1,20,000 and 0.6 probability that cash inflow after tax will be ₹1,44,000. The probability assigned to cash in flows after tax for the 2nd year-end are as follows:

The cash inflow year –end 1	₹1,20,000		₹1,44,000
The cash inflow year –end 2	Probability		Probability
	₹57,600	0.2	96,000
	₹76,800	0.3	1,20,000
	₹1,05,600	0.5	1,44,000
			0.10

The firm uses 8% discount rate for this type of investment.

MTP_Final_Syllabus 2016_Jun2017_Set 1

- (i) Construct a decision tree for the proposed Investment project and calculate the expected Net Present Value.
- (ii) What is the most likely NPV of the project and what is the corresponding probability?
- (iii) What is the probability of the project having a negative NPV? **[4+2+2=8]**

- (3) (a)** 'S' invested ₹50000 in debt- orientated fund when NAV was ₹16.10 and sold the units allotted when NAV was ₹17.10 after one year. Assume that there existed an entry load of 2% and no exit load. He received ₹2 per unit as dividend which is taxable at 30% during the year. Ignore capital gains tax. What is the after tax rupee return from this investment?

[6]

- (b)** Evaluate performance of funds M, N and Market portfolio from the following information available for the past six months-

Month (Return %)	Apr	May	Jun	July	Aug	Sept
Fund M	3.25	1.50	(1.00)	3.75	1.25	0
Fund N	2.50	(1.25)	0	2.75	2.25	1.25
Market portfolio	1.00	(0.75)	2.00	1.75	0.25	3.25

The 6 month Treasury Bills carry an interest rate of 6% p.a.

[10]

- (4) (a)** A company has a choice of investments between several Equity- oriented Funds. The company has an amount of ₹1 crore to invest. The details of the funds are as follows:

Mutual Funds	M	N	O	P	Q
Beta	1.7	1.0	0.9	2.1	0.7

Required:

- (i) If the company invests 20% of its investments in the first two mutual funds, and an equal amount in the mutual funds O, P and Q, what is the beta of the portfolio?
- (ii) If the company invests 15% of its investments in O, 15% in M, 10% in Q and the balance in equal amount in the other two mutual funds, what is the beta of the portfolio?
- (iii) If the expected return of the market portfolio is 14% at a beta factor of 1.0, what will be the portfolio's expected return in both the situations given above? **[3+3+2=8]**

- (b)** Yamuna Ltd. is an un-levered firm and undertakes three projects A, B and C. The risk-free rate of return is 8% and the return from the market is 12%. The projects have a weight of 0.5, 0.3 and 0.2 respectively. Their respective betas are 1.3, 1.0 and 0.8.

You are required to compute:

- (i) Expected return from each project;
- (ii) Expected return for the company; and
- (iii) Cost of capital.

[3+3+2=8]

- (5) (a)** Theoretical Forward Price — no Dividends, no carrying cost compute the theoretical forward price of the following securities for 1 month, 3 months and 6 months —

MTP_Final_Syllabus 2016_Jun2017_Set 1

Securities of	DD Ltd	EE Ltd	FF Ltd
Spot price [S_0]	₹160	₹2600	₹600

You may assume a risk free interest rate of 9% p.a. and 12% p.a.

- (b) Stock of Kamla Woodwork is currently quoted at ₹110. In three months time it could either be ₹90 or ₹135. Ascertain the value of Call Option with an exercise price of ₹120 if the risk free rate of return is 8%.

- (6) (a) You are given the middle rates as under:

₹ 80/£ 1 in London,
₹ 47/US \$ in Delhi, and
US \$ 1.58/£ 1 in New York.

Compute the Arbitrage gain on ₹ 8,00,000.

[8]

- (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) 90 days
Standard deviation of return 22%
Risk-free rate of interest 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]

- (7) (a) Lotus Finance Ltd. is engaged in leasing business. The company wants your advice to structure the lease of a machine costing ₹30 lacs. The machine will have no salvage value. The life of the machine and the lease period will be 5 years and it has to be fully depreciated in 5 years on straight line basis. The average post-tax cost of funds to Lotus Finance is 10%, but to cover the effects of inflation, they prefer to hike this rate by 2%. Assume tax rate is 50% and that taxes are paid on the last day of the year.

Calculate the minimum annual lease rent to be charged if

- (i) the lease rents are payable on the first day of each year.
(ii) the lease rents are payable on the last day of each year;

What is the type of the above lease? Give reasons for your classification.

[5+3+2=10]

- (b) The co-efficient of correlation between returns of Spark Ltd and Sensex is 1.10. The expected returns on the stock of Spark and Sensex are 18% and 14.37% respectively. The return on 182 day T- Bill is 6.31%. What would be the standard deviation of the returns of Spark if the standard deviation of Sensex's return is 17%?

[6]

- (8) Answer any four questions:

[4×4=16]

MTP_Final_Syllabus 2016_Jun2017_Set 1

- (a) What do you understand by credit rating? What aspects credit rating do not measure? [4]
- (b) Discuss unique features of National Level Commodity Exchanges. [4]
- (c) Write short note types of credit risks. [4]
- (d) Write short note on NBFC-MFI [4]
- (e) Write short note on FCCBs. [4]

Present value factors $\left(\frac{1}{1+x}\right)^n$

End of year (n) \ Rate (x)	1	2	3	4	5	6	7
7%	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227
10%	0.9091	0.8264	0.7513	0.6830	0.6209	0.5645	0.5132
12%	0.8929	0.7972	0.7118	0.6355	0.5674	0.5066	0.4523
20%	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791