

Paper 14 Syllabus 2016 MTP Set 1

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 mark for correct choice, 1 mark for justification.) [10*2=20 marks]
- (i) You are a forex dealer in India. Rates of rupee and Euro in the international market are US \$ 0.01962905 and US \$ 1.335603 respectively. What will be your direct quote of € (euro) to your customer?
- (A) ₹ 69.5900
(B) ₹ 68.0420
(C) ₹ 65.1010
(D) ₹ 70.905
- (ii) Marison Ltd. Is planning to invest in USA. The rates of inflation are 8 % in India and 3 % in USA. If spot rate is currently ₹46.50/\$, what spot rate can the company expect after 5 years?
- (A) ₹57.93/\$
(B) ₹58.94/\$
(C) ₹59.00/\$
(D) ₹59/.13/\$
- (iii) The Beta co-efficient of equity stock of ECOBOARD LTD. Is 1.6. The risk free rate of return is 12% and the required rate of return is 18% on the market portfolio. If dividend expected during coming year is ₹2.50 and the growth rate of dividend and earnings is 8%, at what price the stock of ECOBOARD Ltd. Can be sold (based on CAPM)?
- (A) ₹18.38
(B) ₹15.60
(C) ₹12.50
(D) None of the above
- (iv) The spot USD/Yen=190 Yen and one year forward rate of USD/Yen =210Yen The prime rate in US is 15%. What should be Japanese prime rate be?
- (A) 20.11%
(B) 25.22%
(C) 27.11%
(D) 29.55%

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- (v) Which of the following investment avenues has the least risk associated with it?
- (A) Corporate fixed deposits
 - (B) Deposits in commercial banks
 - (C) Public Provident Fund
 - (D) Non convertible zero coupon bond.

- (vi) Consider the following data:

Rate of inflation=5.1%

Beta=0.85

Real rate of return=4.2%

Market return=12.6%

The risk premium for the above security will be:

- (A) 2.5%
- (B) 2.65%
- (C) 2.805%
- (D) 2.95%

- (vii) Covariance between a stock and a market index and variance of market index are 33.56 and 19.15 respectively. The Beta of stock is:

- (A) 1.55
- (B) 1.75
- (C) 1.85
- (D) 1.95

- (viii) The face value of a 364 day T-Bill is ₹100. If purchase price is ₹86, then the yield on such a bill is

- (A) 12.5%
- (B) 13.36%
- (C) 16.32%
- (D) 16.56%

- (ix) A company has obtained quotes from two different manufacturers for an equipment. The details are as follows :

<i>Product</i>	<i>Cost (Million)</i>	<i>Estimated life (years)</i>
Make X	4.50	10
Make Y	6.00	15

Ignoring operation and maintenance cost, which one would be cheaper? The company's cost of capital is 10%.

[Given : PVIFA (10%, 10 years) = 6.1446 and PVIFA (10%, 15 years) = 7.6061]

- (A) Make X will be cheaper
- (B) Make Y will be cheaper
- (C) Cost will be the same
- (D) None of the above

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- (x) The stock of ABC Ltd sells for ₹ 240. The present value of exercise price and value of call option are ₹217.40 and ₹ 39.60 respectively. What is the value of put option?
- (A) ₹ 16.50
 (B) ₹ 22.00
 (C) ₹17.00
 (D) ₹18.00

Section B

Answer any five questions from question nos. 2 to 8. Each question carries 16 marks.

2. (a) DS Inc. is considering a new plan in Netherlands. The Plan will cost 26 million Guilders. Incremental cash flows are expected to be 3 million Guilders per year for the first 3 years. 4 million Guilders for the next 3, 5 million Guilders in years 7 to 9, and 6 million Guilders in years 10 through 19, after which the project will terminate with no residual value. The present exchange rate is 1.90 Guilders per dollar. The required rate of return on repatriated dollar is 16%.
 Required:
- (i) If the exchange rate stays at 1.90, what is the project NPV?
 (ii) If the Guilder appreciates to 1.84 for years 1-3, to 1.78 for years 4-6, 1.72 for years 7-9, and to 1.65 for years 10-19, what happens to NPV?

Year	0	1-3	4-6	7-9	10-19
Discount factors at 16%	1	2.246	1.439	0.922	1.270

- (b) From the following project details calculate the sensitivity of the
- (i) Project cost
 (ii) Annual cash flow, and
 (iii) Cost of capital.

Which variable is the most sensitive?

Project cost	₹12,000	Annual Cash flow	₹4,500
Life of the project	4 Years	Cost of capital	14%

The annuity factor at 14% for 4 years is 2.9137 and at 18% for 4 years is 2.6667. [8+8 marks]

3. (a) Following information is available regarding four Mutual Funds:

Mutual Fund	Return (%)	Standard Deviation (σ)	Beta (β)
A	12	15	0.80
B	16	22	0.76
C	21	37	1.15
D	13	24	1.32

Risk free rate of return is 10% and face value is ₹ 100 each.

Evaluate the performance of these Mutual Funds using Sharpe Ratio and Treynor's Ratio. Comment on the evaluation after ranking the Funds.

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- (b) (I) An investor purchased 300 units of a mutual fund at ₹12.25 per unit on 31st December, 2016. As on 31st December, 2017 he has received ₹1.25 as dividend and ₹1.00 as capital gains distribution per unit,

Required:

- (i) The return on investment if the NAV as on 31st December, 2017 is ₹13.00.
 (ii) The return on investment as on 31st December, 2017 if all dividends and capital gains distributions are reinvested into additional units of the fund at ₹12.50 per unit.
- (II) Moonlight mutual fund is an open-end fund with 50 Lakh units outstanding. You buy 2,100 units today. The dividend paid and the closing NAV for 2 years are as follows:

Year	Dividend (₹)	NAV (₹)
Today	-	19
1	0.20	21
2	0.25	23

Calculate Money Weighted rate of Return (MWROR), if you reinvest dividends

[6+(6+4) marks]

4. a) An investor is interested to construct a portfolio of securities ALFA and GAMA. He has collected the following information about the proposed investment:

	ALFA	GAMA
Expected return	20%	25%
σ	12%	16%

Co-efficient of Correlation (r) between ALFA and GAMA is 0.16.

He wants to constitute only 5 portfolios of ALFA and GAMA as follows:

- (1) All funds invested in ALFA.
- (2) 50% of funds in ALFA and 50% in GAMA.
- (3) 75% of funds in ALFA and 25% in GAMA.
- (4) 25% of funds in ALFA and 75% in GAMA.
- (5) All funds invested in GAMA.

You are required to calculate:

- (A) Expected return under different portfolios.
- (B) Risk factor associated with these portfolios.
- (C) Which portfolio is best from the view-point of risk?
- (D) Which portfolio is best from the view-point of return?

- (b) A portfolio manager has the following four stocks in his portfolio:

Security	No. of shares	Market Price per share (₹)	β = Beta
VSL	10,000	50	0.9
CSL	5,000	20	1.0
SML	8,000	25	1.5
APL	2,000	200	1.2

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Compute the following:

- (i) Portfolio Beta (β).
- (ii) If the Portfolio Manager seeks to reduce the Beta to 0.8, how much Risk-Free investment should he bring in?
- (iii) If the Portfolio Manager seeks to increase the Beta to 1.2, how much Risk-Free investment should he bring in? [8+8 marks]

5. (a) The following table shows interest rates and exchange rates for the US Dollar and French Franc. The spot exchange rate is 7.05 Francs per Dollar. Complete the missing entries:

	3 months	6 months	1 year
Euro-dollar interest rate (Annual)	11.5%	12.25%	?
Euro-franc interest rate (Annual)	19.5%	?	20%
Forward Francs per dollar	?	?	7.52
Forward discount on Franc (% per year)	?	(6.3%)	?

- (b) Suppose a dealer Rupam quotes 'All-in-cost' for a generic swap at 8% against six month LIBOR flat. If the notional principal amount of swap is ₹5,00,000,

- (i) Calculate Semi-Annual fixed payment.
- (ii) Find the first floating rate payment for (i) above if the six month period from the effective date of swap to the settlement date comprises 183 days and that the corresponding LIBOR was 6% on the effective date of swap.
- (iii) In (ii) above, if settlement is on 'Net' basis, how much the fixed rate payer would pay to the floating rate payer?

Generic swap is based on 30/360 days basis.

[10+6 marks]

6. (a) The following two-way quotes appear in the Foreign Exchange Market:

	Spot	2 months forward
₹ / US \$	₹ 46.00 / 46.25	₹ 47.00 / 47.50

Required:

- (i) How many US Dollars should a firm sell to get ₹ 25 lakhs after 2 months?
- (ii) How many Rupees is the firm required to pay so as to obtain US \$ 2,00,000 in the spot market?
- (iii) Assume that the firm has US \$ 69,000 in current account earning interest. ROI on Rupee investment is 10% per annum. Should the firm en-cash the US \$ now or 2 months later?

- (b) Bharat's subsidiary in India, Emami, procures most of its soaps from a Japanese company. Because of the shortage of working capital in India, payment terms for the Indian importers are typically 180 days or more. Emami wishes to hedge an 8.5 million Japanese Yen payable. Although options are not available on the Indian Rupee (₹), forward rates are available against the Yen. Additionally, a common practice in India is, for companies' like Emami, to work with a currency agent who will, in this case, lock in the current spot exchange for a 4.85% fee. Using the following data, recommend a hedging strategy.

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Spot rate, USD/JPY	yen 120.60/\$	
Spot rate, USD/INR	₹47.75/\$	
180-day forward rate, JPY/INR	₹0.4166/yen	
Expected spot exchange rate in 180 days	₹0.3846/yen	
180-day yen investment rate	1.5%	
180-day rupee investment rate	8.0%	
Cost of capital	12.0%	[6+10 marks]

7. (a) Nava Ratna Ltd. has just installed MACHINE R at a cost of ₹ 2,00,000. This machine has 5 years life with no residual value. The annual volume of production is estimated at 1,50,000 units, which can be sold at ₹ 6 per unit. Annual operating costs are estimated at ₹ 2,00,000 (excluding depreciation) at this output level. Fixed costs are estimated at ₹ 3 per unit for the same level of production.

The company has just come across another model called MACHINE S, capable of giving the same output at an annual operating costs of ₹1,80,000 (excluding depreciation). There will be no change in fixed costs. Capital cost of this machine is ₹ 2,50,000 and the estimated life is 5 years with no residual value.

The company has an offer for sale of MACHINE R at ₹ 1,00,000. But the cost of dismantling and removal will amount to ₹ 30,000. As the company has not yet commenced operation, it wants to sell MACHINE R and purchase MACHINE S.

Nava Ratna Ltd. will be a zero-tax company for 7 years in view of several incentives and allowances available. The cost of capital may be assumed as 14%.

Required:

- (i) Advise the company whether it should opt for replacement.
- (ii) What would be your advice, if MACHINE R has not been installed but the company is in the process of selecting one or the other machine?

[Given: PVIF for 1-5 years = 0.877, 0.769, 0.675, 0.592, 0.519]

- (b) A stock costing ₹120 pays no dividends. The possible prices that the Stock might sell for at the end of the year with the respective probabilities are given below. Compute the Expected Return and its standard Deviation.

Price	115	120	125	130	135	140
Probability	0.1	0.1	0.2	0.3	0.2	0.1

[10+6 marks]

8. Answer any 4 questions out of 5 (4*4=16)

- (a) What are the advantages of OCDs (Optionally Convertible Debentures) to investor?
- (b) Discuss clearing mechanism
- (c) Write short note on prepayment risk.
- (d) Discuss the regulatory role of RBI
- (e) Put-Call Parity Theory.