

PAPER – 14: Advanced Financial Management

MTP_Final_Syllabus 2012_Jun2016_Set 2

Paper – 14 : Advanced Financial Management

Time Allowed: 3 Hours

Full Marks: 100

Section A

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

1. (A) Each Question Carried 2 Marks:

[7×2 =14]

- (i) A project has an equity beta of 1.2 and is going to be financed by 30% debt and 70% equity. Assume debt beta = 0, Risk Free Rate= 10% and Market return = 18%. What is the required rate of return?
- (ii) Zoom Technologies Limited issued 1,00,000 14% debentures of ₹100 each, redeemable after 5 years at ₹110 each. The commission payable to under writers and brokers is 10%. Assuming a tax rate of 45%, will be cost of Debt?
- (iii) The interest rate in the United States is 5%, in Japan, the comparable rate is 1.5%. The spot rate for the yen is \$ 0.012067821. If the interest rate parity holds, what is the 90-day forward rate on the Japanese yen?
- (iv) Return of 'New India' Mutual Fund in a year is 18% and Average rate of return from the market is 12%. The standard deviation in the return of the fund is 3% and the beta of the fund is 2% then what is Treynor Ratio?
- (v) Mr. Akshay requires ₹ 5,00,000 for buying a car exactly after one year from now. He earns 7% Per Annum on the money invested. How much he has to invest today?
- (vi) Mr. X has sold a Call Option on a share with a call premium of ₹4 and Exercise price of the Option is ₹200. The share price on expiry date is 198. What is the gain or loss on expiry date to the call writer? What is the net Gain/Loss to the Call writer?
- (vii) The EBT from a Project is ₹12,50,000 and Cost of the Project is 50,00,000. The Life of the project is 10 years with NIL salvage value. Assuming tax rate of 20%, what is the Average Rate of return on Full cost of the project.

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

- (i) The concept of Security Market Line is also known as Capital Market Line
- (ii) As per Inflation parity theory, If the inflation in country is high compared to the other countries, the currency of that country will appreciate against the other countries that have lower inflation
- (iii) A Put option is 'In-the money' when the price of the underlying asset is below the exercise price of the option
- (iv) Hedge funds are a kind of Money Market Mutual Funds
- (v) NPV and IRR will always give same results while evaluation of the any project
- (vi) A Commercial Paper is a Long term source of Capital

Section B

Answer any 5 Question from the following. Each Question Carried 16 Marks.

2. (a) Electrometric Excellers Ltd. specialize in the manufacture of Nano chips. They have recently developed technology to design a new chips. They are quite confident of selling

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all the 8,000 units that they would be making in a year. The capital equipment that would be required will cost ₹25 lakhs. It will have an economic life of 4 years and no significant terminal salvage value.

During each of the first four years promotional expenses are planned as under:

1 st Year	1	2	3	4
Advertisement	1,00,000	75,000	60,000	30,000
Others	50,000	75,000	90,000	1,20,000
Variable cost of production and selling expenses: 250 per unit				

Additional fixed operating costs incurred because of this new product are budgeted at Rs. 75,000 per year. The company's profit goals call for a discounted rate of return of 15% after taxes on investments on new products. The income tax rate on an average works out to 40%. You can assume that the straight line method of depreciation will be used for tax and reporting.

Work out an initial selling price per unit of the product that may be fixed for obtaining the desired rate of return on investment. Present value of annuity of ₹1 received or paid in a steady stream throughout 4 years in the future at 15% is 3.0079. [10]

(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]

3. (a) Mr. Fed wants to invest an amount of ₹520 lakhs and had approached his Portfolio Manager. The portfolio Manager had advised Mr. Fed to invest in the following manner:

Security	Moderate	Better	Good	Very Good	Best
Amount (In ₹ Lakhs)	60	80	100	120	160
Beta	0.5	1.00	0.80	1.20	1.50

You are required to advise Mr. Fedin regard to the following using Capital Asset Pricing Methodology.

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- (i) Expected return on the portfolio, if the Government Securities are at 8% and the NIFTY is yielding 10%
- (ii) Advisability of replacing Security 'Better' with NIFTY [6]

(b) X Co., Ltd., invested on 1.4.2005 in certain equity shares as below:

Name of Co.	No. of shares	Cost (₹)
M Ltd.	1,000 (₹100 each)	2,00,000
N Ltd.	500 (₹10 each)	1,50,000

In September, 2005, 10% dividend was paid out by M Ltd. and in October, 2005, 30% dividend paid out by N Ltd. On 31.3.2006 market quotations showed a value of ₹220 and ₹290 per share for M Ltd. and N Ltd. respectively.

On 1.4.2006, investment advisors indicate (a) that the dividends from M Ltd. and N Ltd. for the year ending 31.3.2007 are likely to be 20% and 35%, respectively and (b) that the probabilities of market quotations on 31.3.2007 are as below:

Probability	factor Price/share of M Ltd.	Price/share of N Ltd.
0.2	220	290
0.5	250	310
0.3	280	330

You are required to:

- (i) Calculate the average return from the portfolio for the year ended 31.3.2006;
- (ii) Calculate the expected average return from the portfolio for the year 2006-07; and
- (iii) Advise X Co. Ltd., of the comparative risk in the two investments by calculating the standard deviation in each case. [10]

4. (a) 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]

(b) Equity share of PQR Ltd. is presently quoted at ₹320. The Market Price of the share after 6 months has the following probability distribution.

Market Price (₹)	180	260	280	320	400
Probability	0.1	0.2	0.5	0.1	0.1

A put option with a strike price of ₹300 can be written. You are required to find out expected value of option at maturity (i.e., 6 months) [8]

5. (a) Classify the following items under the appropriate category – Whether Money Market (MM) or Capital Market (CM):

(i) RBI and Government are participants

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- (ii) Regulated by SEBI
- (iii) Tenor of instruments is usually less than a year
- (iv) Treasury Bills
- (v) Commercial Papers
- (vi) Zero Coupon Bonds
- (vii) Equity Share
- (viii) Debentures

[8]

(b) The following two-way quotes appear in the foreign exchange market

Quote	Spot Rate	1 Month Forward Rate
INR/USD	56.00 – 56.25	57.00 -57.50

Required:

- (1) How many US Dollars should a firm sell to get ` 30 Lakhs after two months?
- (2) How many Rupees is the firm required to pay to obtain US \$2,40,000 in the Spot market?
- (3) Assume the firm has US \$ 69,000 Current Account's earning interest. ROI on Rupee investment is 10% p.a. should the firm encash the US \$ now 2 months later? [6]

6. (a) You are given the following information about 3 funds, Tanni (All Equity Fund), Manni (Equal Debt and Equity Mix) and Danni (High Debt Low Equity Fund)-

Particular	Tanni	Manni	Danni
Average Monthly Return [A]	1.46%	18%	12%
Standard Deviation	10%	5%	3%
Correlation with Market	0.30	0.70	0.50

If Risk Free Return is 5%, Return on Market Portfolio is 16% with a standard deviation of 4%. Ascertain:-

1. Total gain and the Net Gain under Fama's Net selectivity.
2. Systematic Risk and Unsystematic Risk [8]

(b) A mutual fund analyst has collected the following past performance reports of five funds and the Sensex. Rank these funds based on Sharpe ratio, Treynor ratio, and Jensen's measure. Assume Risk free rate of 7%. Explain the behavior of these rankings.

Portfolio	Return (%)	Standard deviation (%)	Beta
A	16.5	25.6	1.25
B	15.3	20.5	0.95
C	9.5	15.8	0.85
D	22.5	16.5	1.15
E	18.5	18.5	1.05
SENSEX	14.0	13.5	1.00

[8]

7. (a) From the following information pertaining to returns of Security MN and the market for the past 3 years, ascertain the value of Beta of Security MN?

Year	1	2	3
Security MN	14%	15%	18%
Market	9%	12%	15%

[8]

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(b) What are the differences between Commodity Futures and Financial Futures? [8]

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

(a) Book Building Process

(b) Advantages of Depository system

(c) Money Market Mutual Funds

(d) Repo and Reverse Repo

(e) Project Financing VS Capital Financing

[4×4 = 16]