

PAPER-14: ADVANCED FINANCIAL MANAGEMENT

MTP_Final_Syllabus 2012_Jun2015_Set 2

The following table lists the learning objectives and the verbs that appear in the syllabus learning aims and examination questions:

	Learning objectives	Verbs used	Definition
LEVEL C	KNOWLEDGE What you are expected to know	List	Make a list of
		State	Express, fully or clearly, the details/facts
		Define	Give the exact meaning of
	COMPREHENSION What you are expected to understand	Describe	Communicate the key features of
		Distinguish	Highlight the differences between
		Explain	Make clear or intelligible/ state the meaning or purpose of
		Identify	Recognize, establish or select after consideration
	APPLICATION How you are expected to apply your knowledge	Illustrate	Use an example to describe or explain something
		Apply	Put to practical use
		Calculate	Ascertain or reckon mathematically
		Demonstrate	Prove with certainty or exhibit by practical means
		Prepare	Make or get ready for use
		Reconcile	Make or prove consistent/ compatible
		Solve	Find an answer to
	ANALYSIS How you are expected to analyse the detail of what you have learned	Tabulate	Arrange in a table
		Analyse	Examine in detail the structure of
		Categorise	Place into a defined class or division
		Compare and contrast	Show the similarities and/or differences between
		Construct	Build up or compile
		Prioritise	Place in order of priority or sequence for action
	SYNTHESIS How you are expected to utilize the information gathered to reach an optimum conclusion by a process of reasoning	Produce	Create or bring into existence
		Discuss	Examine in detail by argument
		Interpret	Translate into intelligible or familiar terms
EVALUATION How you are expected to use your learning to evaluate, make decisions or recommendations	Decide	To solve or conclude	
	Advise	Counsel, inform or notify	
	Evaluate	Appraise or asses the value of	
		Recommend	Propose a course of action

PAPER-14: Advanced Financial Management

Time Allowed: 3 hours

Full Marks: 100

This paper contains 5 questions. All questions are compulsory, subject to instruction provided against each question. All workings must form part of your answer.

Assumptions, if any, must be clearly indicated.

Question No. 1. (Answer all questions. Each question carries 2 marks)

(a) The capital of Khan Ltd. is as follows:

9% preference shares of ₹10 each	₹ 3,00,000
Equity shares of ₹10 each	₹ 8,00,000

Following further information is available:

Profit after Tax	₹ 2,70,000
Equity Dividend paid	20%
The market price of equity shares	₹ 40 each

Calculate the EPS and PE ratio of Khan Ltd. [2]

(b) 'Can all NBFCs accept deposits'- Justify. [2]

(c) You have ₹ 10,000 to invest in a stock portfolio. Your choices are Stock X with an expected return of 18% and Stock Y with an expected return of 11%. If your goal is to create a portfolio with an expected return of 16.5%, how much money will you invest in Stock X and in Stock Y? [2]

(d) A call option is selling for ₹ 6 when the share price is ₹ 54 and the exercise price is ₹ 64, is there an arbitrage opportunity? If yes, show how it works. [2]

(e) State the term "Buy on Close" and "Buy on Opening" in commodity market. [2]

(f) From the following rates, determine ₹/Canadian \$ exchange rate: [2]
₹/US \$: ₹47.7568/47.9675
Canadian \$/US\$: 1.5142/1.5450

(g) Calculate the price at which a T- Bill maturing on 23rd March 2015 would be valued on July 13, 2014 at a yield of 6.8204%. [2]

(h) An investor wrote a naked call option. The premium was ₹ 2.50 per share and the market price and exercise price of the share are ₹ 37 and ₹ 41 respectively. The contract being for 100 shares, calculate the amount of margin under First Method, which is required to be deposited with the clearing house. [2]

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- (i) Zoom International Ltd. 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%. Calculate the after-tax cost of debt, assuming a tax rate of 45%. [2]
- (j) The beta of stock of S Ltd. Is 2.0 and is currently in equilibrium. The required rate of return on the stock is 12% and the expected return on the market is 10%. Suddenly due to changes in the economic conditions, the expected return on the market increases to 12%. Other things remaining the same, calculate the new required rate of return on the stock. [2]

Question No. 2. (Answer **any three** questions. Each question carries **8 marks**)

- 2 (a)(i).** The following data is given about the two mutual funds viz. SB Multi cap Fund & FT Flexi cap Fund. Assuming that Mr. X is an investor wants to invest in one of these, which he should prefer, if this fund is going to be:

- I. His entire investment
 II. One of the many portfolios in his entire investment [3+3]

	SB Multi cap Fund	FT Flexi cap Fund
Average Return	2.76%	7.56%
Beta	0.69	1.40
Standard Deviation	6.17%	14.89%
Sharpe Measure	0.45	0.51
Treynor Measure	4.00	5.40
Alpha	1.63	5.28

- 2 (a)(ii).** Mr. Anil purchased a commercial paper of Zenith Inc. issued for 6 months in the market for ₹ 9,61,000. The company issued the CP with a face value of ₹10,00,000. Determine the rate of return which Mr. Anil earns. [2]

- 2(b)(i).** A mutual fund made an issue of 10,00,000 units of ₹10 each on January 01, 2014. No entry load was charged. It made the following investments:

₹

5,000 Equity shares of ITC @ ₹250	12,50,000
100,000 Equity shares of Sabero Organics @ ₹75	75,00,000
8% Government Securities	12,50,000
	1,00,00,000

During the year, dividends of ₹12,00,000 were received on equity shares. Interest on G – Sec was received as and when due. At the end of the year equity shares of ITC and Sabero are quoted at ₹300 and ₹100 respectively. Other investment is at par.

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Find out the Net Asset Value (NAV) per unit given that operating paid during the year amounted to ₹5,00,000.

Also find out the NAV, if the Mutual fund had distributed a dividend of Re. 0.55 unit during the year to the unit holders. **[5+1]**

2(b)(ii). State Debt Financing by Indian Commercial Banks. **[2]**

2(c)(i). From the following particulars, calculate the effective rate of interest p.a. as well as the total cost of funds to Bhaskar Ltd., Which is planning a CP issue:

Issue price of CP	: ₹97,550	
Face Value	: ₹1,00,000	
Maturity Period	: 3 Months	
Issue Expenses	:	
Brokerage	: 0.15% for 3 months	
Rating Charges	: 0.50% p.a.	
Stamp Duty	: 0.175% for 3 months	[1+3]

2(c)(ii). List the functions of Forward Market Commission of India. **[4]**

2.(d) (i) Orange purchased 200 units of Oxygen Mutual Fund at ₹45 per unit on 31st December, 2013. In 2014, he received ₹1.00 as dividend per unit and a capital gains distribution of ₹2 per unit.

Required:

- I. Calculate the return for the period of one year assuming that the NAV as on 31st December, 2014 was ₹48 per unit.
- II. Calculate the return for the period of one year assuming that the NAV as on 31st December, 2014 was ₹48 per unit and all dividends and capital gains distributions have been reinvested at an average price of ₹46.00 per unit.

Ignore taxation. **[2+4]**

2.(d)(ii) State the two main distinguishing features of Project Finance compared to Corporate Finance. **[2]**

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Question No. 3. (Answer **any two** questions. Each question carries **10 marks**)

3.(a)(i) An Indian exporter has sold handicrafts items to an American business house. The exporter will be receiving US \$100000 in 90 days. Premium for a dollar put option with a strike price of ₹ 48 and a 90 days settlement is ₹ 1. The exporter anticipates the spot rate after 90 days to be ₹ 46.50.

- I. Should the exporter hedge its account receivable in the option market?
- II. If the exporter is anticipating the spot rate to be ₹ 47.50 or ₹ 48.50 after 90 days, how would it effect the exporter's decision? **[3+2]**

3.(a)(ii) Which position on the Index future gives a speculator a complete hedge against the following transactions.

- I. The share of Right Ltd. is going to rise. He has a long position on the cash market of ₹ 50 lacs on the Right Ltd. The beta of the Right Ltd. is 1.25.
- II. The share of Wrong Ltd. is going to depreciate. He has a short position on the cash market of ₹ 25 lacs on the Wrong Ltd. The beta of the Wring Ltd. is 0.9.
- III. The share of Fair Ltd. is going to stagnate. He has a short position on the cash market of ₹ 20 lacs of Fair Ltd. The beta of the Fair Ltd. is 0.75. **[5]**

3.(b)(i) Interest rates for 3 months in US and Canada are as follows:

Can \$ / US SOPT	1.235 – 1.240
3m Forward	1.255 – 1.260

Currency	Borrow	Invest
US \$	4%	2.5%
Can \$	4.5%	3.5%

Advise the currency in which borrowing and lending for 3 months needs to be done for a US company. Taken 3 month = 90/360 fraction of a year. **[6]**

3.(b)(ii) On 31-08-2011, the value of stock index was ₹ 2,200. The risk free rate of return has been 8% per annum. The dividend yield on this Stock Index is as under:

Month	Dividend Paid	Month	Dividend Paid
January	3%	July	3%
February	4%	August	4%
March	3%	September	3%
April	3%	October	3%
May	4%	November	4%
June	3%	December	3%

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Assuming the interest is continuously compounded daily, find out the future price of contract deliverable on 31-12-2011.

Given $e^{0.01583} = 1.01593$

[4]

3(c)(i). Shoe Company sells to a wholesaler in Germany. The purchase price of the shipment is 50,000 deutsche marks with term of 90 days. Upon payment Shoe company will convert DM to \$. The present spot rate for DM/\$ is 1.71, whereas the 90 days forward rate is 1.70. You are required to calculate and explain:

- I. If Shoe Company were to hedge its foreign exchange risk, what would it do? What transactions are necessary?
- II. Is the DM at a forward premium or at a discount?
- III. Calculate the implied differential in interest rates between the two countries.

[Use Interest Rate Parity assumption]

[1+1+4]

3(c)(ii). Explain the need for setting-up a Depository in India.

[4]

Question No. 4. (Answer **any two** questions. Each question carries **8 marks**)

4 (a). Consider the following information on two stocks, A and B:

[1+(1½+1½)+2+1+1]

Year	Return on A (%)	Return on B (%)
2014	10	12
2015	16	18

You are required to determine:

- I. The expected return on portfolio containing A and B in the proportion of 40% and 60% respectively.
- II. The Standard deviation of return from each of the two stocks.
- III. The covariance of returns from the two stocks.
- IV. Correlation coefficient between the returns of the two stocks.
- V. The risk of a portfolio containing A and B in the proportion of 40% and 60%.

4 (b)(i). The beta coefficient of Target Ltd. is 1.4. The company has been maintaining 8% rate of growth in dividends and earnings. The last dividend paid was ₹ 4 per share. Return on GOI Securities is 10%. Return on Market Portfolio is 15%. The current market price of one share of Target Ltd. is ₹ 36. Calculate the equilibrium price per share of Target Ltd.

Would you advice purchasing the share?

[2+1]

4(b)(ii). Following is the data regarding six securities:

	U	V	W	X	Y	Z
Return%	10	10	15	5	11	10
Risk% (Std. Deviation)	5	6	13	5	6	7

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- I. Which of three securities will be selected?
- II. Assuming perfect correlation, analyze whether it is preferable to invest 80% in security U and 20% in security W or to invest 100% in V. **[2+3]**

4(c). Mr Shoaib is considering building a portfolio containing two assets, L and M. Asset L will represent 40% of the rupee value of the portfolio, and asset M will account for the other 60%. The expected returns over the next 6 years, 2010-2015, for each of these assets, are shown in the following table.

	Year	2010	2011	2012	2013	2014	2015
Expected	Asset L	14	16	17	18	18	19
Return %	Asset M	20	18	16	14	12	10

- I. Calculate the expected value of portfolio returns, over the 6-year period.
- II. Calculate the standard deviation of expected portfolio returns, σ over the 6-year period.
- III. Is investing in the negatively correlated equal weighted portfolio of L & M better than individual investment? **[3+3+2]**

Question No. 5. (Answer **any two** questions. Each question carries **10 marks**)

5 (a)(i). The capital structure of Hindustan Traders Ltd. as on 31.3.2004 is as follows:

Equity Capital: 100 lakh equity shares of ₹10 each	₹10 crores
Reserves	2.00 crores
14% Debentures of ₹100 each	3.00 crores

For the year ended 31.3.2004 the company is to pay equity dividend at 20%. As the company is a market leader with good future, dividend is likely to grow by 5% every year. The equity shares are now traded at T80 per share on the stock exchange. Income-tax rate applicable to the company is 50%.

Required:

- I. The current weighted cost of capital.
- II. The company has plans to raise a further ₹ 5 crores by way of long-term loan at 16% interest. When this takes place the market value of the equity shares is expected to fall to ₹ 50 per share. Calculate the new weighted average cost of capital of the company. **[3+4]**

5 (a)(ii) List the problems in determination of cost of capital. **[3]**

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5 (b)(i). Following are the data on a capital project being evaluated by management of X Ltd.

Particulars	Project M
Annual Cost Saving	₹ 40,000
Useful Life	4 years
I.R.R.	15%
Profitability index (PI)	1.064
NPV	?
Cost of capital	?
Cost of project	?
Pay back	?
Salvage value	0

Find the missing values considering the following table of discount factor only.

Discount factor	15%	14%	13%	12%
1 year	0.869	0.877	0.855	0.893
2 years	0.756	0.769	0.783	0.797
3 years	0.658	0.675	0.693	0.712
4 years	0.572	0.592	0.613	0.636
	2.855	2.913	2.974	3.038

[1+1½+1½+1]

5(b)(ii). ABC Ltd. furnished you the following information:

Cost of Plant	₹10,00,000
Working Capital	₹5,00,000
Annual Sales Value	₹15,00,000
Annual Cash operating expenses	₹7,00,000
Project life	4 years
Tax rate	40%
Depreciation	SLM
Cost of Capital	10% p.a.
Terminal value	Plant 20% of Cost & Working Capital 100%

Compute Modified Internal Rate of Return or Terminal Rate of Return.

[5]

5 (c). Forward Planning Ltd. is considering whether to invest in a project which would entail immediate expenditure on capital equipment of ₹ 40,000. Expected sales from the project are as follows:

Probability	Sales Volume (Units)
0.10	2,000
0.25	6,000
0.40	8,000
0.15	10,000
0.10	14,000

Once sales are established at a certain volume in the first year, they will continue at that same volume in subsequent year. The unit selling prices will be ₹ 10, the unit variable cost

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₹ 6 and the additional fixed costs will be ₹ 20,000 (all cash items). The project would have a life of 6 years after which the equipment would be sold for scrap which would fetch ₹ 3,000. You are required to find out:

- I. The expected value of the NPV of the project
- II. The expected volume of sales per annum required to justify the project.

The cost of capital of the company is 10%. Discount factor of ₹1 per annum for 6 years @ 10% is 4.355 and the discount factor of ₹ 1 at the end of the sixth year at 10% is 0.5645. Ignore taxation.

[5+5]