PAPER-14: ADVANCED FINANCIAL MANAGEMENT

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
		Identity	Recognize, establish or select after consideration
		Illustrate	Use an example to describe or explain something
	APPLICATION How you are expected to apply your knowledge	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
		Tabulate	Arrange in a table
	ANALYSIS How you are expected to analyse the detail of what you have learned	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
		Produce	Create or bring into existence
	SYNTHESIS How you are expected to utilize the information gathered to reach an optimum conclusion by a process of reasoning	Discuss	Examine in detail by argument
		Interpret	Translate into intelligible or familiar terms
		Decide	To solve or conclude
	EVALUATION How you are expected to use your learning to evaluate, make decisions or recommendations	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) A company is considering Projects X and Y with following information: **[2]**

Project	Expected NPV (₹)	Standard deviation (₹)
X	1,22,000	1,10,000
Y	2,25,000	1,70,000

Evaluate the project which may be recommended based on coefficient of variation as a measure of risk.

(b) Explain Non-financial Intermediaries. **[2]**

(c) The Beta co-efficient of equity stock of TECHBOARD LTD. is 1.6. The risk-free of return is 12% and the required rate of return is 18% on the market portfolio. If the dividend expected during the coming year is ₹3.75 and the growth rate of dividend and earnings is 10%, find out at what price the stock of Techboard Ltd. can be sold (based on the CAPM)? **[2]**

(d) State Reverse Book Building Process. **[2]**

(e) PNB Ltd. placed ₹75 Crores in overnight call with a foreign bank for a day in overnight call. The call ruled at 7.35% p.a. Calculate the amount the investor would receive from the foreign bank the next day. **[2]**

(f) In September 30, 2014, a three-month Put on VINTEX LTD.'s stock with an exercise price of ₹150 sold for ₹13.64. The stock price was ₹140.00. The risk-free rate was 6% per annum. Calculate the price to be quoted/paid for a CALL on Vintex Ltd.'s stock with same maturity and exercise price.
[Given. PVIF (6%, ¼ year) = 0.9852] , PVIF (6%, ½ year) = 0.9709] and PVIF (6%, 1 year) = 0.9434] **[2]**

(g) A treasury bill is maturing on 28-Feb- 2015 is trading in the market on 3rd March 2014 at a price of ₹92.8918. Identify the discount rate inherent in this price. **[2]**

(h) Mr. Mohit is willing to purchase a 5 years ₹ 10000 par value PSU bond is having a coupon rate of 9%. His required rate of return is 10%. How much Mr. Mohit should pay to purchase the bond if it matures at par?
[Given: PVIFA (10%, 5 years) = 3.791 and PVIF (10%, 5 years) = 0.621]
[Given: PVIFA (9%, 5 years) = 3.890 and PVIF (9%, 5 years) = 0.650] **[2]**

(i) Define Out-of-Pocket Cost. **[2]**

(j) Mr. Kumar is a fund manager of an equity fund is expected to provide risk premium of 10% and standard deviation of returns of 16%. Miss Ankita, a client of Mr. Kumar chooses to invest ₹1,05,000 in equity fund and ₹45,000 in T-Bills. If T – Bills are trading at 7% p.a. Estimate the expected return and standard deviation of return on the portfolio for Miss Ankita. **[2]**

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

2 (a). A has invested in three mutual fund schemes as per details given below:

Particulars	**MFA**	**MFB**	**MFC**
Date on investment	1.12.14	1.1.15	1.3.15
Amount of investment	₹50000	₹ 1 lakh	₹50000
NAV at entry date	₹ 10.50	₹ 10.00	₹ 10.00
Dividend received up to 31.3.04	₹950	₹1400	Nil
NAV as on 31.3.04	₹ 10.40	₹10.15	₹9.80

Required:
Tabulate the effective yield on per annum basis in respect of each of the three schemes to Mr. A up to 31.03.15. **[8]**

2(b)(i). Satendra invested ₹1,00,000 in debt-oriented fund when the NAV was ₹8.05, and sold the units allotted when the NAV was ₹ 8.55 after one year. Assume that there existed an entry load of 2% and no exit load. He received ₹ 1 per unit as dividend which is taxable at 30% during the year. Ignore capital gains tax. Compute after tax rupee return from this investment. **[5]**

2(b)(ii). NBFC are not being compulsorily registered with RBI. - Justify. **[3]**

2(c)(i). List five important regulations prescribed by SEBI for the investments that can be made by a Mutual Fund. **[5]**

2(c)(ii). The unit price of TSS Scheme of a mutual fund is ₹ 100. The public offer price (POP) of the unit is ₹ 102.04 and the redemption price is ₹ 99.50. Calculate: (1) Front-end Load, a.nd (2) Back-end Load. **[$1\frac{1}{2}+1\frac{1}{2}$]**

2(d)(i). The RBI offers 91 -day T-Bill to raise ₹15000 Crores. The following bids have been received.

Bidder	**Bid rate**	**Amount (₹ Crores)**
A	98.95	18,000
B	98.93	7,000
C	98.92	10,000

(1) Calculate the yield for each of the price at which the bid has been made.
(2) Who are the winning bidders if it was a yield based auction, and how much of the security will be allocated to each winning bidder? **[3+2]**

2(d)(ii). Distinguish between 'Inter Corporate Deposits' and 'Public Deposits'. **[3]**

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

3(a)(i). Suppose a dealer Rupam quotes 'All-in-cost' for a generic swap at 10% against six month LIBOR flat. If the notional principal amount of swap is ₹7,00,000.

(1) Calculate Semi-Annual fixed payment.

(2) Find the first floating rate payment for (1) 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 8% on the effective date of swap.

(3) In 2 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. **[2+2+2]**

3(a)(ii). List the benefits of Rolling Settlement. **[4]**

3 (b)(i). Following are the details of cash inflows and outflows in foreign currency denominations of Mac Co., an Indian export firm, which have no foreign subsidiaries —

Currency	Inflow	Outflow	Spot rate	Forward rate
US $	4,00,00,000	2,00,00,000	48.01	48.82
French Franc (F Fr)	2,00,00,000	80,00,000	7.45	8.12
UK £	3,00,00,000	2,00,00,000	75.57	75.98
Japanese Yen	1,50,00,000	2,50,00,000	3.20	2.40

(1) Determine the net exposure of each foreign currency in terms of Rupees.

(2) Are any of the exposure positions off-setting to some extent? **[6+2]**

3(b)(ii). A sold in June Nifty futures contract for ₹3,60,000 on June 15, For this he had paid an initial margin of ₹34,000 to his broker. Each Nifty futures contract is for the delivery of 200 Nifties. On June 25, the index was closed on 1925. How much profit / loss A has made? **[2]**

3(c)(i). The following quotes are available.

Spot ($/Euro)	0.8385/0.8391
3-m swap points	20/30
Spot ($/Pound)	1.4548/1.4554
3-m swap points	35/25

Find the 3-m (€/£) outright forward rates. **[5]**

3(c)(ii). Describe swaps. Discuss its necessity and financial benefits associated with a swap transactions. **[2+2+1]**

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

4 (a). Stocks P and Q have the following historical returns —

Year	2011	2012	2013	2014	2015
Stock P's Return (K)	-12.24	23.68	34.44	5.82	28.30
Stock Q's Return (K)	-7.00	25.55	44.09	2.20	20.16

You are required to calculate the average rate of return for each stock during the period 2011 to 2015. Assume that someone held a Portfolio consisting 60% of Stock P and 40% of Stock Q.

Calculate the realized rate of return on the Portfolio in each year from 2011 to 2015. Find out the average return on the Portfolio during the period. (You may assume that year ended on 31st March). **[3+5]**

4(b)(i). Describe the techniques used in Industry Analysis. **[2]**

4(b)(ii). There are two portfolios L and M. known to be on the minimum various set for a population of three securities A, B and C. The weights for each of the portfolios are given below:

	WA	WB	WC
Portfolio L	0.21	0.60	0.19
Portfolio M	0.20	0.65	0.15

Ascertain the stock weights for a portfolio made up with investment of ₹ 3,000 in L and ₹ 2,000 in M. **[4]**

4(b)(iii). The risk free return is 8 per cent and the return on market portfolio is 14 per cent. If the last dividend on Share 'A' was ₹5.00 and assuming that its dividend and earnings are expected to grow at the constant rate of 7 per cent. The beta of share 'A' is 2.50. Compute the intrinsic value of share A. **[2]**

4(c)(i). Mention any four important factors that you would consider for investment decisions in portfolio management. **[2]**

4(c)(ii). The Capital of J Ltd, an exclusive software support service provider to B Ltd, is made up of 40% Equity Share Capital, 60% Accumulated Profits and Reserves. J does not have any other clients. The sensex yields a return of 15%. The risk-less return is measured at 9.25%.

(1) If the shares of J Ltd carry a Beta (β_J) of 1.6, compute cost of capital, and also the beta of activity support service to B Ltd.

(2) If there is another client, K Ltd, accounting for 45% of Assets of J Ltd, with a Beta of 1.70, compute the Beta of B Ltd, so that the equity beta of 1.60 is not affected. In such a case, find out the expected return from B Ltd and K Ltd. **[(2+2)+(1+1)]**

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

5 (a)(i). Company Z is operating an elderly machine that is expected to produce a net cash inflow of ₹ 40,000 in the coming year and ₹ 40,000 next year. Current salvage value is ₹ 80,000 and next year's value is ₹ 70,000. The machine can be replaced now with a new machine, which costs ₹1,50,000, but is much more efficient and will provide a cash inflow of ₹ 80,000 p.a. year for 3 years. Company Z wants to know whether it should replace the equipment now or wait a year with the clear understanding that the new machine is the best of the available alternatives and that it in turn be replaced at the optimal point. Ignore tax. Take opportunity cost of capital as 10 per cent. Advise with reasons. **[3+3+2]**

5(a)(ii). XYZ Ltd adopts constant WACC approach and believes that its cost of debt and overall cost of capital is at 12% and 15% respectively. If the ratio of the market value of debt to the market value of equity is 0.9, calculate the rate of return that the Equity Shareholders will earn. Assume that there are no taxes. **[2]**

5(b)(i). As an executive of a lending institution, what factors should you critically evaluate with respect to a large industrial project, from the perspectives of environmental and economic viability? **[4]**

5(b)(ii). A Production Manager is planning to produce a new product and he wishes to estimate the raw material requirement for that new product. On the basis of usage for a similar product introduced previously, he has developed a frequency distribution of demand in tonnes per day for a two month period. Used this data to simulate the raw material usage requirements for 7 days. Compute also expected value and comment on the result.

Demand Tonnes/day	Frequency No. of days
10	6
11	18
12	15
13	12
14	6
15	3

Random Number: 27, 13, 80, 10, 54, 60, 49. **[6]**

5 (c). 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 cot 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	(8,00,000)	1,40,000	3,20,000	3,60,000	3,00,000	80,000
Project N	(8,00,000)	8,72,000	40,000	40,000	16,000	12,000

You are required to:

(1) Calculate the NPV and IRR of each project.

(2) State with reasons, which project you would recommended.

(3) 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

(3+4)+2+1=10]