

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	90,000
Y	2,25,000	1,20,000

Which project will you recommend based on coefficient of variation as a measure of risk?

(b) Define 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 ₹2.50 and the growth rate of dividend and earnings is 8%, at what price the stock of Techboard Ltd. can be sold (based on the CAPM) ? **[2]**

(d) What do you mean by Reverse Book Building? **[2]**

(e) PNB Ltd. placed ₹52 Crores in overnight call with a foreign bank for a day in overnight call. The call ruled at 5.65% p.a. What is the amount it would receive from the foreign bank the next day? **[2]**

(f) In September 30, 2013, a six-month Put on VINTEX LTD.'s stock with an exercise price of ₹75 sold for ₹6.82. The stock price was ₹70.00. The risk-free rate was 6% per annum. How much would you be willing to pay for a CALL on Vintex Ltd.'s stock with same maturity and exercise price?
[Given. PVIF (6%, ½ year) = 0.9709] and PVIF (6%, 1 year) = 0.9434] **[2]**

(g) A treasury bill is maturing on 28-June- 2014 is trading in the market on 3rd July 2013 at a price of ₹92.8918. What is the discount rate inherent in this price? **[2]**

(h) Mr. Mohit is willing to purchase a 5 years ₹ 1000 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]**

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(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 ₹70,000 in equity fund and ₹30,000 in T-Bills. If T – Bills are trading at 7% p.a., the expected return and standard deviation of return on the portfolio of Miss Ankita will be. [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	1.12.13	1.1.14	1.3.14
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	₹1500	Nil
NAV as on 31.3.04	₹ 10.40	₹10.10	₹9.80

Required:

What is the effective yield on per annum basis in respect of each of the three schemes to Mr. A up to 31.03.14? [8]

2(b)(i). Satendra invested ₹50000 in debt-oriented fund when the NAV was ₹16.10, and sold the units allotted when the 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? [5]

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

2(c)(i). State 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 ₹ 10. The public offer price (POP) of the unit is ₹ 10.204 and the redemption price is ₹ 9.80. Calculate: **(1)** Front-end Load, and **(2)** Back-end Load. [1½+1½]

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) What is 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]

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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 8% against six month LIBOR flat. If the notional principal amount of swap is ₹5,00,000,

- (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 6% 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). Write down 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 1850. 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). What is swaps? Explain its necessity. Also state financial benefits created by swap transactions. **[2+2+1]**

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

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

Year	2009	2010	2011	2012	2013
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 2009 to 2013. assume that someone held a Portfolio consisting 50% of Stock P and 50% of Stock Q.

What would have been the realized rate of return on the Portfolio in each year from 2009 to 2013? What would be the average return on the Portfolio during the period? (You may assume that year ended on 31st March). **[3+5]**

4(b)(i). What are 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	0.18	0.63	0.19
Portfolio M	0.24	0.60	0.16

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 ₹2.00 and assuming that its dividend and earnings are expected to grow at the constant rate of 5 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 sensx yields a return of 15%. The risk-less return is measured at 6.75%.

(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 35% of Assets of J Ltd, with a Beta of 1.40, what should be the Beta of B Ltd, so that the equity beta of 1.60 is not affected? In such a case, what should be 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 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 9% and 12% respectively. If the ratio of the market value of debt to the market value of equity is 0.8, what rate of return do Equity Shareholders 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 cost of capital of 10% and the net after-tax cash flow of the projects are as follows:

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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:

- (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]