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 has expected Net Operating Income – ₹ 2,40,000; 10% Debt – ₹7,20,000 and Equity Capitalisation rate - 20% what is the weighted average cost of capital for the company? **[2]**

(b) Write the objectives of the takeout finance scheme? **[2]**

(c) A security whose standard deviation is 3.0 percent, the correlation coefficient for the security with the market is 0.8 & the market standard deviation is 2.2 percent. The return from government securities is 5.2% and from the market portfolio is 9.8%. What is the required return on the security? **[2]**

(d) What do you mean by butterfly spread? **[2]**

(e) Star Ltd. is planning a commercial paper issue of ₹25 lakh. Given the following details, you are required to calculate the issue price of commercial paper. **[2]**

Face Value	=₹25 lakh
Maturity period	= 3 months
Effective interest p.a.	= 10.5%

(f) The stock of Dhanlaxmi Ltd. (FV ₹ 10) quotes ₹ 520 on NSE ad the 3 months futures price quotes at ₹ 532. The borrowing rate is given as 15% p.a. What would be the theoretical price of 3 month Dhanlaxmi Future if the expected annual dividend yield is 25% p.a. payable before expiry? **[2]**

(g) Define security receipts. **[2]**

(h) Aptex Ltd. has both European call and put options traded on NSE. Both options have an expiration date 6 months and exercise price of ₹ 30. The call and put are currently selling for ₹ 4 respectively. If the risk free rate of interest is 6% p.e., what would be the stock price of Aptex Ltd.? [Given PVIF (6%, 0.5 yrs) = 0.9709]. **[2]**

(i) The P/V ratio of a firm dealing in precision instruments is 50% and margin of safety is 40%. Calculate net profit, if the sales volume is ₹ 50,00,000. **[2]**

(j) Samar Ltd. has an excess cash of ₹ 8,00,000 which it wants to invest in short-term marketable securities. Expenses relating to investment will be ₹ 20,000. If the securities invested will have an annual yield of 9%, what would be the period of investment so as to earn a pre-tax income of 5%? (Ignore time value). **[2]**

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

2 (a)(i). Describe the key reasons to invest in infrastructure in India. **[4]**

2 (a)(ii). The following portfolio details of a fund are available:

Stock	Shares	Price (₹)
A	200000	35
B	300000	40
C	400000	20
D	600000	25

The fund has accrued management fees with the portfolio manager totaling ₹30000. There are 40 lakhs shares outstanding. What is the NAV of the fund? If the fund is sold with a front end load of 5%, what is the sale price? **[3+1]**

2 (b). Evaluate performance of Funds M, N and the Market Portfolio from the following information available for the past six months —

Month (Return %)	Apr	May	Jun	Jul	Aug	Sep
Fund M	3.25	1.50	(1.00)	3.75	1.25	0
Fund N	2.50	(1.25)	0	2.75	2.25	1.25
Market Portfolio	1.00	(0.75)	2.00	1.75	0.25	3.25

The 6 Month Treasury Bills carry an interest rate of 6% p.a. **[8]**

2 (c)(i). Nomination facility available to the Depositors of NBFCs. - Justify. **[3]**

2 (c)(ii). The RBI offers 91-day T-Bill to raise ₹ 5000 Crores. The following bids have been received.

Bidder	Bid rate	Amount (₹ Crores)
A	98.95	1,800
B	98.93	700
C	98,92	1,000
D	98.90	1,200
E	98.90	600
F	98.87	200
G	98.85	350
H	98.85	150

(1) 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?

(2) If this auction is single price auction, that is the price to be paid by the winning bidders? **[3+2]**

2 (d)(i). Are Secured debentures treated as Public Deposit? If not who regulates them? **[2]**

2 (d)(ii). What are the benefits of future trading? **[3]**

2 (d)(iii). Suppose a company issues a Commercial Paper as per the following details:

Date of Issue	17th January 2014
Date of Maturity	17th April 2014
No. of Days	90 days
Face Value	₹ 1000
Issue Price	₹ 985
Credit rating exp.	0.5% of the size of issue
IPA charges	0.35%
Stamp Duty	0.5%

What is the cost of the commercial paper? What is the yield to investor? **[2+1]**

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

3 (a)(i). Draw a relationship between call option and put option in put-call parity theory. **[4]**

3 (a)(ii). An Indian customer who has imported equipment from Germany has approached a bank for booking a forward Euro contract. The delivery is expected six months from now. The following rates are quoted:

($/Euro) spot 0.8453/0.8457

6m-Swap points 15/20

₹/$ spot 46.47/46.57

6m-Swap points 20/30

What rate the bank will quote, if it needs a margin of 0.5%? **[6]**

3 (b). The equity share of Softex Ltd., is quoted at ₹ 210. A 3-month call option is available at a premium of ₹ 6 per share and a 3-month put option is available at a premium of ₹ 5 per share.

(i) Ascertain the next pays-offs to the option holder of a call option and a put option, given that:

(1) The strike price in both cases is ₹ 220; and

(2) The share price on the exercise day is ₹ 200, ₹ 210, ₹ 220, ₹ 230 and ₹ 240 respectively.

(ii) Also indicate the price range at which the call and the put options may be gainfully exercised. **[4+4+2]**

3 (c)(i). State the term "Contango" and "Backwardation" as used with respect to Future Contracts. **[3]**

3 (c)(ii). What are the principle weaknesses of Indian Stock Market? **[3]**

3 (c)(iii). The following information is available for a call option:

Time to Expiration	: 3 months
Risk-free Rate	: 8%
Exercise Price	: ∈65
Stock Price	: ∈ 70
Call Price	: ∈ 12

You are required to calculate value of put option. **[4]**

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

4 (a). Shahid has invested in four securities A, B, C and D, the particulars of which are as follows:

Security	Amount Invested (₹)	Beta (β)
A	1,25,000	0.60
B	1,50,000	1.50
C	80,000	0.90
D	1,45,000	1.30

If RBI Bonds carries an interest rate of 8% and nifty yields 14%, what is the expected return on portfolio? If investment in Security C is replaced by investment in RBI Bonds, what is the corresponding change in Portfolio Beta and expected return? **[4+4]**

4 (b)(i). Explain the financial meaning of investment? **[4]**

4 (b)(ii). An investor is holding 1,000 shares of Dream Land Company. Presently the dividend being paid by the company is ₹2 per share and the share is being sold at ₹25 per share in the market.

However several factors are likely to change during the course of the year as indicated below —

	Risk Free Rate	Market Risk Premium	Beta Value	Expected Growth Rate
Existing	12%	6%	1.6	5%
Revised	10%	4%	1.45	9%

In view of the above factors whether the investor should buy, hold or sell the shares? Why? **[4]**

4 (c). Shah Ltd., has been specially formed to undertake two investment opportunities. The risk and return characteristics of the two projects are shown below:

Project	Expected Return	Risk
P	15%	3%
Q	22%	7%

Shah Ltd. plans to invest 80% of its available funds in project P and 20% in Q. The directors believe that the correlation co-efficient between the returns of the projects is +1.0.

Required—

(1) Calculate the returns from the proposed portfolio of Projects P and Q.

(2) Calculate the risk of the portfolio;

(3) Suppose the correlation coefficient between P and Q was -1. How should the company invest its funds in order to obtain zero risk portfolio. **[2+3+3]**

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

5 (a). A company wish to acquire an asset costing ₹1,00,000. The company has an offer from a bank to lend @ 18%. The principal amount is repayable in 5 years end installments. A leasing Company has also submitted a proposal to the Company to acquire the asset on lease at yearly rentals of ₹ 280 per ₹ 1,000 of the assets value for 5 years payable at year end. The rate of depreciation of the asset allowable for tax purposes is 20% on W.D.V with no extra shift allowance. The salvage value of the asset at the end of 5 years period is estimated to be ₹1,000. Whether the Company should accept the proposal of Bank or leasing company, if the effective tax rate of the company is 50%? The Company discounts all its cash flows at 18%. **[10]**

5 (b)(i). Define forfaiting. Write down the features of forfaiting. **[1+5]**

5 (b)(ii). A company is considering raising funds of about ₹100 Lakhs by one of two alternative methods, viz. 14% Substitutional Tern Loan and 13% Non-Convertible Debentures. The term loan option would attract no major accidental cost. The Debentures would be issued at a discount of 2.5% and would involve cost of issue ₹1 lakh. Advice the company as to the better option based on effective cost of capital. Assume a tax rate of 50%. **[4]**

5 (c). Khan limited company operates a lodging house with a restaurant, shops and recreational facilities attached. Its manager has entrusted you with the planning of the coming year's operations, more particularly on the level of profits the company was likely to earn. The lodging house has 100 double- bed rooms, which are likely to be rented at ₹ 150 per day. The manager expects an occupancy ratio of 70% for a period of 250 days during the tourist season. It is also anticipated that both the beds in a room will be occupied during the period. Each person staying in the lodging house is expected to spend, on the basis of past statistics, ₹ 30 per day in the shops attached to the lodge and ₹ 60 per day in the restaurant. The recreational facilities are not charged to the customer.

Some other relevant data available to you is as under:

I. Variable cost to volume ratio:

	Shops	**Restaurant**
Cost of goods sold	40%	30%
Supplies	5%	15%
Others	5%	10%

II. For the lodging house, the variable costs are ₹ 25 per day per occupied room for cleaning, laundry etc.

III. Annual fixed costs for the entire complex are ₹ 19,50,000.

From the above, you are required to prepare:

(1) An income statement for the coming year; and

(2) An analysis to indicate whether the manager's suggestion of reducing the room rent to ₹ 120 per day to enhance the occupancy ratio to 80% should be accepted. **[5+5]**