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) XYZ & Co. has 20,000 equity shares of ₹10 each fully paid. The current market price per share is ₹20. Earnings available to the shareholders at the end of the period under consideration are ₹60,000. Calculate cost of equity share capital using earnings/price ratio. **[2]**

(b) Immense Regional Disparities is a key reason to invest in infrastructure in India- Justify. **[2]**

(c) The standard deviation of Greaves Ltd. stock is 24% and its correlation coefficient with market portfolio is 0.5. The expected return on the market is 16% with the standard deviation of 20%. If the risk-free return is 6%, calculate the required rate of return on Greaves Ltd. script. **[2]**

(d) The six months Forward Price of a security is ₹ 208.18. The rate of borrowing is 8% per annum payable at monthly rates. Calculate the Spot Price of the security. **[2]**

(e) State the Banking Financial Institutions. **[2]**

(f) Suppose that 1 French Franc could be purchased in the Foreign Exchange Market for 20 US cents today. If the Franc appreciated by 10% tomorrow against the dollar, how many Francs would a Dollar buy tomorrow? **[2]**

(g) Mr. Khan purchased 300 units of a MUTUAL FUND at a price of ₹25 per unit at the beginning of the year. He paid a front-end load of 5%. The expense ratio of the fund is 2%. The growth rate in fund's security is 15 % during the year. Calculate the rate of Return of the fund if security sold at the end of the year. **[2]**

(h) Six months T-bills have a nominal rate of 7 percent, while default – free Japanese bonds that mature in 6 months have a nominal rate of 5.5 percent. In the spot exchange market 1 yen equals $ 0.009. If interest rate parity holds, calculate the six months forward exchange rate. **[2]**

(i) Calculate the expected rate of return of the security (K_e) from the following information:

Beta of a security	0.5
Expected rate of return on market portfolio	15%
Risk-free rate of return	0.06

If another security has an expected rate of return (K_e) of 18%, what should be its beta? **[1+1]**

(j) The characteristics of two securities A and B are as follows:

Particulars	Security A	Security B
Expected Return (%)	12	13
Standard deviation of return (%)	21	29
Beta (β)	1.10	1.20

The correlation co-efficient between the return on Securities A and B is 0.94. If variance of returns on the market index is 400%, calculate the systematic risk of a portfolio consisting of two securities in equal proportion. **[2]**

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

2 (a). A 3 day repo is entered into on July 10, 2015 on an 11.99% 2019 security, maturing on April 7, 2019. The face value of the transaction is ₹ 3 Crores. The price of the securities is ₹ 116.42. If the repo rate is 7%, calculate the settlement amount on July 10, 2015 and settlement amount on July 13, 2015. Assume that PNB has lent securities in the first leg to RBI. Calculate the cost of 3-day repo to PNB. [Use 360 day convention] **[3+3+2]**

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

2(b)(ii). Given are the details of dividend & capital gains distribution for a mutual fund with beginning and evening NAV for years 2010-2015. Calculate the five year compounded annual return. **[5]**

[Amount in ₹]

Particulars	2015	2014	2013	2012	2011	2010
Beginning NAV						-10
Dividends	0.95	0.85	0.85	0.75	0.60	
Capital Gains	1.05	1.00	0.00	1.00	0.00	
Closing NAV	15.73					

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

2(c)(ii). 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]**

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

2(d)(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]**

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

3(a)(i). Describe the principle weaknesses of Indian Stock Market. **[3]**

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

3 (a)(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]**

3(b)(i). Shares of Pranav Ltd are being quoted at ₹ 500. 3-Months Futures Contract Rate is ₹ 520 per share for a lot size of 500 shares.

If Pranav Ltd is not expected to distribute any Dividend in the interim, what is the recommended course of action for a trader in shares (Risk Free Rate being 9%)?

If the 3-Months Futures Contract Rate is ₹ 500, what should be the action? **[3+3]**

3(b)(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

Calculate the rate that bank should quote, to keep a margin of 0.5%. **[6]**

3 (c). 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]**

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

4(a)(i). List the techniques used in Industry Analysis? **[2]**

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

4(b)(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 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)]**

4 (c). 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 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 2011 to 2015? What would been the average return on the Portfolio during the period? (You may assume that year ended on 31st March). **[3+5]**

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

5 (a) (i) State forfaiting. List the features of forfaiting. **[1+5]**

5 (a)(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 (b). 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]**

5 (c). 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]**