Paper – 14 – Strategic Financial Management

Full Marks : 100 **Time allowed: 3 hours**

Answer Question No. 1 which is compulsory and carries 20 marks and any five from Question No. 2 to 8.

Section A [20 marks]

1. **Choose the correct option among four alternative answer. (1 mark for correct choice, 1 mark for justification.)** **[10*2=20 marks]**

   (i) An investor buys a call option contract for a premium of ₹ 200. The exercise price is ₹ 20 and the current market price of the share is ₹ 17. If the share price after three months reaches ₹ 25, what is the profit made by the option holder on exercising the option? Contract is for 100 shares. Ignore the transaction charges.
   (A) ₹ 200
   (B) ₹ 250
   (C) ₹ 300
   (D) ₹ 350

   (ii) One year euro interest rate is 3% (compounded quarterly)
   One year rupee interest rate is 6 % (compounded quarterly)
   The forward six months exchange rate is ₹58.82/euro
   According to interest rate parity, the spot exchange rate is:
   (A) ₹ 57.96
   (B) ₹58.10
   (C) ₹58.60
   (D) None of the above

   (iii) ANGEL LTD, an export customer who relied on the inter-bank rate of ₹/$ 46.50/10 requested his banker to purchase a bill for USD 80000. What is the rate to be quoted to ANGEL LTD if the banker wants a margin of 0.08?
   (A) ₹46.40
   (B) ₹46.46
   (C) ₹46.60
   (D) None of the above.

   (iv) The net profit margin, total assets turnover ratio and total assets to net worth of a company are 5%, 1.5 and 2.0 respectively. The ROE of the company will be
   (A) 5%
   (B) 15%
   (C) 7.5%
   (D) 10%

(v) Following information is available regarding a mutual fund:

Return	**13**
Risk (σ)	**16**
Beta (β)	**0.90**
Risk free rate	**10**

Sharpe ratio and Treynor's ratio are:

(A) 0.17, 3.33

(B) 0.10, 3.33

(C) 0.25,3.33

(D) 0.19,3.33

(vi) Calculate P/E ratio, if dividend payout ratio is 55%, ROE is 16% and the required rate of return is 14%.

(A)8.09

(B)8.64

(C)9.12

(D)9.45

(vii)The co-efficient of co-relation between returns of SPARK LTD and SENSEX is 1.10. The expected returns on the stock of Spark and Sensex are 18% and 14.37% respectively. The return on 182 day T –Bill is 6.31%. What would be standard deviation of the returns of Spark if the standard deviation of Sensex's return is 17%

(A) 20.12%

(B) 22.41%

(C) 26.46%

(D) Insufficient data.

(viii)The stock is currently selling at ₹270. The call option to buy the stock at ₹265 costs ₹12. What is the Time Value of the option?

(A) ₹13

(B) ₹5

(C) ₹17

(D) ₹7

(ix) The spot Value of Nifty is 4430. An investor bought a one month Nifty for 4410 call option for a premium of ₹12. The option is:

(A) In the money

(B) At the money

(C) Out of the money

(D) Insufficient data.

(x) LEENZA LTD. currently pays a dividend of ₹4 per share that is expected to grow at rate of 10% for the next year after which it is expected to grow at rate of 7% forever. What value would you place on the stock of this company if a rate of 15% return is required? (Round off your answer to the nearest integer).(Given PVIF(15% 1 year=0.8696)

(A) ₹53.05

(B) ₹55.00

(C) ₹58.10

(D) None of the above.

Section B

Answer any five questions from question nos. 2 to 8. Each question carries 16 marks.

2. (a) PQR LTD. is considering a project in U.S.A., which will involve an initial investment of US $ 1,40,00,000. The project will have 5 years of life. Current spot exchange rate is ₹60.30 per US $. The risk-free rate in USA is 7% and the same in India is 8%. Cash inflows from the project are as follows:

Years	1	2	3	4	5
Cash inflows (US $)	18,00,000	24,00,000	30,00,000	50,00,000	60,00,000

Calculate the NPV of the Project using foreign currency approach. Required rate of return on the Project is 15%.

[Given: PV factors for 13.93% (for 5 Years) are 0.878, 0.770, 0.676, 0.594, 0.521]

(b) A company is considering two mutually exclusive projects X and Y. Project X costs ₹3,00,000 and Project Y ₹3,60,000. You have been given below the NPV and probability distribution for each project:

Project X		Project Y	
NPV Estimate (₹)	Probability	NPV Estimate (₹)	Probability
30,000	0.1	30,000	0.2
60,000	0.4	60,000	0.3
1,20,000	0.4	1,20,000	0.3
1,50,000	0.1	1,50,000	0.2

Required:

(i) Compute the expected Net Present Value (NPV) of Projects X and Y.

(ii) Compute the risk attached to each project i.e. Standard Deviation of each probability distribution.

(iii) Which Project do you consider more risky?

(iv) Compute the Profitability Index of each Project. [6+10 marks]

3. (a) (I) The following information is extracted from STP Mutual Fund Scheme:

Asset Value at the beginning of the month - ₹65.78

Annualised return -15%

Distributions made in nature of Income and Capital Gain (per unit respectively)- ₹0.50 and ₹0.32

You are required to:

(i) Calculate the month end assets value of the mutual fund scheme (answers should be limited to 2 decimal places).

(ii) Comment on month end NAV briefly.

(II) A mutual fund had a Net Asset Value (NAV) of ₹ 620 at the beginning of the year. During the year a sum of ₹ 5 was distributed as dividend besides ₹ 3 as capital gains distribution. At the end of the year, NAV was ₹ 700. Calculate the total return for the year.

(b) The following particulars are furnished about three Mutual Fund schemes P, Q and R:

Particulars	Scheme P	Scheme Q	Scheme R
Dividend distributed (₹)	1-75	—	1-30
Capital appreciation (₹)	2-97	3-53	1-99
Opening NAV (₹)	3200	27-15	23-50
Beta	1-46	1-10	1-40

Ascertain the Alpha of the three schemes and evaluate their performance, if Govt, of India Bonds carry an interest rate of 6-84% and the Nifty has increased by 12-13%.

[(6+2)+8]

4. (a) Given below are the Market Value of Equity and their Unlevered Beta in respect of 4 SBUs of a company:

SBUs	Market Value of Equity (₹ in crore)	Unlevered Beta
A	100	1.00
B	100	1.10
C	150	1.50
D	150	2.00

The company has ₹ 50 crores of Outstanding Debt. Required:

(i) Estimate the Beta for the company as a whole. Is this Beta going to be equal to the Beta estimated by regressing past returns of the company against a market index? Give suitable reasons for your answer.

(ii) If the Treasury Bond rate is 8%, estimate the cost of Equity of the company. Which cost of Equity would you use to value the SBU "D"? The average market risk premium is 7%.

(b) If beta (β) is 1.50; Rf (risk free returns) is 6%; and Rm (market return) is 12%' what should be the return on the share (Rj) with beta as given above? If the alpha value is +1.5, what would be corresponding actual returns from the stock? What is the significance of Alpha in the investment market? [10+6 marks]

5. (a) PPT LTD. Exports edible oils to Middle- East and African countries. In June the company exported an consignment worth $5 million to Zambia. The payment for the same is expected to realize during the month of September. The company has entered into an option forward contract for delivery of $5 million over the month of September.

The market quotes on June 30 at the time of entering into the contract were as follows:

June 30, Spot	**₹ /$**	**47.05/08**
Forward	**1 month**	**23/25 paise**
	2 month	**47/49 paise**
	3 month	**70/72 paise**

On September 2017, the company approached the bank for extension of the contract by another two months that is for delivery during the month of November.

The market quotes on September '2017 were as follows:

Spot	**₹ /$**	**47.58/60**
Forward	**1 month**	**18/20 paise**
	2 month	**37/39 paise**
	3 month	**55/57 paise**

On November '2017, the company approached the bank to cancel the forward contract. The exchange rates as on November '2017 were as follows:

Spot	**₹/$**	**47.97/99**
Forward	**1 month**	**16/18 paise**
	2 month	**33/35 paise**

You are required to calculate:

(i) The forward rate to be quoted on June 30.

(ii) The exchange rate to be quoted by the bank on September '2017 for the extension of the contract.

(iii) The amount of cash flows due to extension of the contract.

(iv) The exchange rate at which the forward contract to be cancelled on November 2017.

(v) The amount of cash flows due to cancellation of the contract.

(Ignore FEDAI margin for merchant quotes.)

(b) A Petrochemical Plant needs to process 20,000 barrels of oil in three months' time. To hedge against the rising price the plants needs to go long on the futures contract of crude oil. The spot price of crude oil is ₹ 2,925 per barrel, while futures contract expiring three months from now is selling for ₹ 3,300 per barrel. By going long on the futures the petrochemical plant can lock in the procurement at ₹ 3,300 per barrel. Assuming the size of one futures contract of 100 barrels, the firm buys 200 futures to cover its exposure of 20,000 barrels.

Find out the price that would be payable under two scenarios of rise in price to ₹ 3,600 or fall in price to ₹ 2,700 per barrel after three months. [10+6 marks]

6. (a) On 1st April, 3 months interest rate in the US and Germany are 6.5 percent and 4.5 percent per annum respectively. The $/DM spot rate is 0.6560. What would be the forward rate for DM for delivery on 30th June?

(b) During a year the price of British Gilts (face value £100) rose from £105 to £110, while paying a coupon of £8. At the same time the exchange rate moved from $/£ of 1.80 to 1.70. What is the total return to an investor in USA who invested in this security?[8+8 marks]

7. (a) A company has received 3 proposals for the acquisition of an asset on lease costing ₹ 1,50,000.

Option I : The terms of offer envisaged payment of lease rentals for 96 months. During the first 72 months, the lease rentals were to be paid @ Rs. 30 p.m. per ₹ 1,000 and during the remaining 24 months @ ₹. 5 p.m. per ₹1,000. At the expiry of lease period, the lessor has offered to sale the assets at 5% of the original cost.

Option II : Lease agreement for a period of 72 months during which lease rentals to be paid per month per ₹ 1,000 are ₹ 35, ₹ 30, ₹ 26, ₹ 24, ₹ 22 and ₹ 20 for next 6 years. At the end of lease period the asset is proposed to be abandoned.

Option III : Under this offer a lease agreement is proposed to be signed for a period of 60 months wherein a initial lease deposit to the extent of 15% will be made at the time of signing of agreement. Lease rentals @ ₹ 35 per ₹ 1,000 per month will have to be paid for a period of 60 months on the expiry of leasing agreement, the assets shall be sold against the initial deposit and the asset is expected to last for a further period of three years.

You are required to evaluate the proposals keeping in view the following parameters:

a. Depreciation @ 25%
b. Discounting rate @ 5%
c. Tax rate applicable @ 40%

The monthly and yearly discounting factors @ 15% discount rate are as follows:

Period	1	2	3	4	5	6	7	8
Monthly	0.923	0.795	0.685	0.590	0.509	0.438	0.377	0.325
Yearly	0.869	0.756	0.658	0.572	0.497	0.432	0.376	0.327

(b) Mr. X has the following portfolio of four shares:

The risk free rate of return is 7% and the market rate of return is 14%. Determine the portfolio beta and return.

Name	Beta	Investment ₹ Lakhs.
A Ltd.	0.45	0.80
B Ltd.	0.35	1.50
C Ltd.	1.15	2.25
D Ltd.	1.85	4.50

[10+8 marks]

8. Answer any 4 questions out of 5.s **[4*4=16 marks]**

(a) Difference between trading of securities in physical vs. dematerialized form
(b) What makes commodity trading attractive?
(c) Benefits of using Financial Derivatives.
(d) Difference between NBFCs and Banks
(e) What do you understand by BID-Ask rate?