

Question 1 is Compulsory. Attempt Four Questions from remaining Five Questions.

Working Notes should form part of the Answer.

QUESTION 1(A)

(12 MARKS)

Mr. Abhishek is interested in investing Rs. 2,00,000 for which he is considering following three alternatives:

- (i) Invest Rs. 2,00,000 in Mutual Fund X (MFX)
- (ii) Invest Rs. 2,00,000 in Mutual Fund Y (MFY)
- (iii) Invest Rs. 1,20,000 in Mutual Fund X (MFX) and Rs. 80,000 in Mutual Fund Y (MFY)

Average annual return earned by MFX and MFY is 15% and 14% respectively. Risk free rate of return is 10% and market rate of return is 12%.

Covariance of returns of MFX, MFY and market portfolio Mix are as follow:

	MFX	MFY	Mix
MFX	4.800	4.300	3.370
MFY	4.300	4.250	2.800
Mix	3.370	2.800	3.100

You are required to calculate:

- (i) variance of return from MFX, MFY and market return,
- (ii) portfolio return, beta, portfolio variance and portfolio standard deviation,
- (iii) expected return, systematic risk and unsystematic risk; and
- (iv) Sharpe ratio, Treynor ratio and Alpha of MFX, MFY and Portfolio Mix

QUESTION 1(B)

(4 MARKS)

The risk free rate of return is 5%. The expected rate of return on the market portfolio is 11%. The expected rate of growth in dividend of X Ltd. is 8%. The last dividend paid was Rs. 2.00 per share. The beta of X Ltd. equity stock is 1.5.

- (i) What is the present price of the equity stock of X Ltd.?
- (ii) How would the price change when:
 - The inflation premium increases by 3%
 - The expected growth rate decreases by 3% and
 - The beta decreases to 1.3.

QUESTION 1(C)

Explain: Angel Investors.

(4 MARKS)

QUESTION 2(A)

(6 MARKS)

EFD Ltd. is an export business house. The company prepares invoice in customers' currency. Its debtors of US\$. 10,000,000 is due on April 1, 2015.

Market information as at January 1, 2015 is:

Exchange rates US\$/INR		Currency Futures US\$/INR	
Spot	0.016667	Contract size: Rs. 24,816,975	
1-month forward	0.016529	1-month	0.016519
3-months forward	0.016129	3-month	0.016118

	Initial Margin	Interest rates in India
1-Month	Rs. 17,500	6.5%
3-Months	Rs. 22,500	7%

On April 1, 2015 the spot rate US\$/INR is 0.016136 and currency future rate is 0.016134.

Recommend as to which of the following methods would be most advantageous to EFD Ltd.

- (i) Using forward contract
- (ii) Using currency futures
- (iii) Not hedging the currency risk

QUESTION 2(B)

(8 MARKS)

ABC Co. is considering a new sales strategy that will be valid for the next 4 years. They want to know the value of the new strategy. Following information relating to the year which has just ended, is available:

Income Statement	Rs.
Sales	20,000
Gross margin (20%)	4,000
Administration, Selling & distribution expense (10%)	2,000
PBT	2,000
Tax (30%)	600
PAT	1,400
Balance Sheet Information	
Fixed Assets	8,000
Current Assets	4,000
Equity	12,000

If it adopts the new strategy, sales will grow at the rate of 20% per year for three years. The gross margin ratio, Assets turnover ratio, the Capital structure and the income tax rate will remain unchanged.

Depreciation would be at 10% of net fixed assets at the beginning of the year.

The Company's target rate of return is 15%.

Calculate the incremental value due to adoption of the strategy.

QUESTION 2(C) Explain some of the innovative ways to finance a startup. **(6 MARKS)**

QUESTION 3(A)

(8 MARKS)

On April 3, 2016, a Bank quotes the following:

Spot exchange Rate (US \$ 1)	INR 66.2525	INR 67.5945
2 months' swap points	70	90
3 months' swap points	160	186

In a spot transaction, delivery is made after two days. Assume spot date as April 5, 2016.

Assume 1 swap point = 0.0001,

Calculate:

- (i) swap points for 2 months and 15 days. (For June 20, 2016),
- (ii) foreign exchange rate for June 20, 2016, and
- (iii) the annual rate of premium/discount of US\$ on INR, on an average rate.

QUESTION 3(B)

(8 MARKS)

The following data is available for a bond:

Face Value	Rs. 1,000
Coupon Rate	11%
Years to Maturity	6
Redemption Value	Rs. 1,000
Yield to Maturity	15%

(Round-off your answers to 3 decimals)

Calculate the following in respect of the bond:

- (i) Current Market Price.
- (ii) Duration of the Bond.
- (iii) Volatility of the Bond.
- (iv) Expected market price if increase in required yield is by 100 basis points.
- (v) Expected market price if decrease in required yield is by 75 basis points.

QUESTION 3(C)

Discuss briefly the steps involved in the Securitization mechanism. **(4 MARKS)**

QUESTION 4(A)

(7 MARKS)

Delta Ltd.'s current financial year's income statement reports its net income as Rs. 15,00,000. Delta's marginal tax rate is 40% and its interest expense for the year was Rs. 15,00,000. The company has Rs. 1,00,00,000 of invested capital, of which 60% is debt. In addition, Delta Ltd. tries to maintain a Weighted Average Cost of Capital (WACC) of 12.6%.

- (i) **Calculate** the operating income or EBIT earned by Delta Ltd. in the current year.
- (ii) **Calculate** the Delta Ltd.'s Economic Value Added (EVA) for the current year?
- (iii) Delta Ltd. has 2,50,000 equity shares outstanding. According to the EVA you calculated in (ii), **Evaluate** how much can Delta pay in dividend per share before the value of the company would start to decrease? If Delta does not pay any dividends, **Evaluate** what would you expect to happen to the value of the company?

QUESTION 4(B)

(8 MARKS)

With relaxation of norms in India for investment in international market upto \$ 2,50,000, Mr. X to hedge himself against the risk of declining Indian economy and weakening of Indian Rupee during last few years, decided to diversify in the International Market.

Accordingly, Mr. X invested a sum of Rs. 1.58 crore on 1.1.20x1 in Standard & Poor Index. On 1.1.20x2 Mr. X sold his investment. The other relevant data is given below:

	1.1.20x1	1.1.20x2
Index of Stock Market in India	7395	?
Standard & Poor Index	2028	1919
Exchange Rate (Rs./\$)	62.00/62.25	67.25/67.50

You are required to **Calculate**:

- (i) The return for a US investor.
- (ii) Holding Period Return to Mr. X.
- (iii) The value of Index of Stock Market in India as on 1.1.20x2 at which Mr. X would be indifferent between investment in Standard & Poor Index and India Stock Market.

QUESTION 4(C) DISCUSS : What you understand about Embedded Derivatives (5 MARKS)

OR

QUESTION 4(C) What is Reverse Stock Split up and why companies resort it. (5 MARKS)

QUESTION 5(A)

(6 MARKS)

If the present interest rate for 6 months borrowings in India is 9% per annum and the corresponding rate in USA is 2% per annum, and the US\$ is selling in India at Rs. 64.50/\$.

Then Recommend:

- (i) Will US \$ be at a premium or at a discount in the Indian forward market?
- (ii) The expected 6 month forward rate for US\$ in India.
- (iii) The rate of forward premium/discount.

QUESTION 5(B)

(6 MARKS)

Mr. A is thinking of buying shares at Rs. 500 each having face value of Rs. 100. He is expecting a bonus at the ratio of 1:5 during the fourth year. Annual expected dividend is 20% and the same rate is expected to be maintained on the expanded capital base. He intends to sell the shares at the end of seventh year at an expected price of Rs. 900 each. Incidental expenses for purchase and sale of shares are estimated to be 5% of the market price. He expects a minimum return of 12% per annum.

Recommend whether Mr. A should buy the shares? If so, what maximum price should he pay for each share? Assume no tax on dividend income and capital gain.

QUESTION 5(C)

(8 MARKS)

Following information is given:

Exchange rates: Canadian dollar 0.666 per DM (spot)

Canadian dollar 0.671 per DM (3-months)

Interest rates: DM 7.5% p.a.

Canadian Dollar - 9.5% p.a.

To take the possible arbitrage gains, what operations would be carried out?

QUESTION 6(A)**(12 MARKS)**

TK Ltd. and SK Ltd. are both in the same industry. The former is in negotiation for acquisition of the latter. Information about the two companies as per their latest financial statements are given below:

	TK Ltd.	SK Ltd.
Rs. 10 Equity shares outstanding	24 Lakhs	12 Lakhs
Debt:		
10% Debentures (Rs. Lakhs)	1160	-
12.5% Institutional Loan (Rs. Lakhs)	-	480
Earnings before interest, depreciation and tax (EBIDAT) (Rs. Lakhs)	800.00	230.00
Market Price/Share (Rs.)	220.00	110.00

TK Ltd. plans to offer a price for SK Ltd. business, as a whole, which will be 7 times of EBIDAT as reduced by outstanding debt and to be discharged by own shares at market price.

SK Ltd. is planning to seek one share in TK Ltd. for every 2 shares in SK Ltd. based on the market price. Tax rate for the two companies may be assumed as 30%.

Calculate and show the following under both alternatives -TK Ltd.'s offer and SK Ltd.'s plan :

- (i) Net consideration payable.
- (ii) No. of shares to be issued by TK Ltd.
- (iii) EPS of TK Ltd. after acquisition.
- (iv) Expected market price per share of TK Ltd. after acquisition.
- (v) State briefly the advantages to TK Ltd. from the acquisition.

Calculations may be rounded off to two decimal points.

QUESTION 6(B)**(8 MARKS)**

On 19th January, Bank A entered into forward contract with a customer for a forward sale of US \$ 7,000, delivery 20th March at Rs. 46.67. On the same day, it covered its position by buying forward from the market due 19th March, at the rate of Rs. 46.655. On 19th February, the customer approaches the bank and requests for early delivery of US \$. Rates prevailing in the interbank markets on that date are as under:

Spot (Rs./\$)	46.5725/5800
March	46.3550/3650

Interest on outflow of funds is 16% and on inflow of funds is 12%. Flat charges for early delivery are Rs. 100.

What is the amount that would be recovered from the customer on the transaction?

Note: Calculation should be made on months basis than on days basis.