

- NOTES:**
- (1) QUESTION NO. 1 IS COMPULSORY. ANSWER ANY FOUR QUESTIONS OUT OF REMAINING FIVE QUESTIONS
  - (2) WORKING NOTES SHOULD FORM PART OF ANSWERS.
  - (3) NEW QUESTION SHOULD BE ON NEW PAGE

**Question No. 1**

**(A)**

T Ltd. and E Ltd. are in the same industry. The former is in negotiation for acquisition of the latter. Important information about the two companies as per their latest financial statements is given below:

	T Ltd.	E Ltd.
Rs. 10 Equity shares outstanding	12 Lakhs	6 Lakhs
Debt:		
10% Debentures ( Rs. Lakhs)	580	--
12.5% Institutional Loan ( Rs. Lakhs)	--	240
Earning before interest, depreciation and tax (EBIDAT) ( Rs. Lakhs)	400.86	115.71
Market Price/share ( Rs.)	220.00	110.00

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

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

CALCULATE the following under both alternatives - T Ltd.'s offer and E Ltd.'s plan:

- (i) Net consideration payable.
- (ii) No. of shares to be issued by T Ltd.
- (iii) EPS of T Ltd. after acquisition.
- (iv) Expected market price per share of T Ltd. after acquisition.

**Note:** Calculations (except EPS) may be rounded off to 2 decimals in lakhs

**(8 Marks)**

**(B)**

M/s. Parker & Co. is contemplating to borrow an amount of Rs.60 crores for a Period of 3 months in the coming 6 month's time from now. The current rate of interest is 9% p.a., but it may go up in 6 month's time. The company wants to hedge itself against the likely increase in interest rate. The Company's Bankers quoted an FRA (Forward Rate Agreement) at 9.30%p.a. EVALUATE the effect of FRA and actual rate of interest cost to the company, if the actual rate of interest after 6 months happens to be (i) 9.60% p.a. and (ii) 8.80% p.a.?

**(8 Marks)**

(C)

State the Characteristics of Venture Capital Financing.

(4 Marks)

**Question No. 2**

(A)

Sun Moon Mutual Fund (Approved Mutual Fund) sponsored open-ended equity oriented scheme "Chanakya Opportunity Fund". There were three plans viz. 'A' – Dividend Re-investment Plan, 'B' – Bonus Plan & 'C' – Growth Plan.

At the time of Initial Public Offer on 1.4.2009, Mr. Anand, Mr. Bacchan & Mrs. Charu, three investors invested Rs. 1,00,000 each & chosen 'B', 'C' & 'A' Plan respectively.

The History of the Fund is as follows:

Date	Dividend %	Bonus Ratio	Net Asset Value per Unit (F.V. Rs. 10)		
			Plan A	Plan B	Plan C
28.07.2013	20		30.70	31.40	33.42
31.03.2014	70	5 : 4	58.42	31.05	70.05
31.10.2017	40		42.18	25.02	56.15
15.03.2018	25		46.45	29.10	64.28
31.03.2018		1 : 3	42.18	20.05	60.12
24.03.2019	40	1 : 4	48.10	19.95	72.40
31.07.2019			53.75	22.98	82.07

On 31st July 2019 all three investors redeemed all the balance units.

CALCULATE:

- (i) Annual rate of return of Mrs. Charu who has invested in 'A' – Dividend Re-investment Plan.
- (ii) Annual rate of return of Mr. Anand who has invested in 'B' – Bonus Plan.
- (iii) Annual rate of return of Mr. Bacchan who has invested 'C' – Growth Plan.

**Assumptions:**

1. Long-term Capital Gain is exempt from Income tax.
2. Short-term Capital Gain is subject to 10% Income tax.
3. Security Transaction Tax 0.2 per cent only on sale/redemption of units.
4. Ignore Education Cess

(10 Marks)

**(B)**

A future contract is available on R Ltd. that pays an annual dividend of Rs. 4 and whose stock is currently priced at Rs. 125. Each future contract calls for delivery of 1,000 shares to stock in one year, daily marking to market. The corporate treasury bill rate is 8%.

Required:

- (i) Given the above information, what should the price of one future contract be ?
- (ii) If the company stock price decreases by 6%, what will be the price of one futures contract ?
- (iii) As a result of the company stock price decrease, will an investor that has a long position in one futures contract of R Ltd. realizes a gain or loss ? What will be the amount of his gain or loss ?

(Ignore margin and taxation, if any)

**(6 Marks)**

**(C)**

Discuss briefly the steps in securitization mechanism.

**(4 Marks)**

**Question No. 3**

**(A)**

Indira has a fund of Rs. 3 lacs which she wants to invest in share market with rebalancing target after every 10 days to start with for a period of one month from now. The present NIFTY is 5326. The minimum NIFTY within a month can at most be 4793.4. She wants to know as to how she should rebalance her portfolio under the following situations, according to the theory of Constant Proportion Portfolio Insurance Policy, using "2" as the multiplier :

- (1) Immediately to start with.
- (2) 10 days later – being the 1<sup>st</sup> day of rebalancing if NIFTY falls to 5122.96.
- (3) 10 days further from the above date if the NIFTY touches 5539.04.

For the sake of simplicity, assume that the value of her equity component will change in tandem with that of the NIFTY and the risk free securities in which she is going to invest will have no Beta.

**(8 Marks)**

**(B)**

Closing values of BSE Sensex from 6<sup>th</sup> to 17<sup>th</sup> day of the month of January of the year 20xx were as follows:

Days	Date	Day	Sensex
1	6	THU	34522
2	7	FRI	34925
3	8	SAT	No Trading
4	9	SUN	No Trading
5	10	MON	35222
6	11	TUE	36000
7	12	WED	36400
8	13	THU	37000
9	14	FRI	No Trading
10	15	SAT	No Trading
11	16	SUN	No Trading
12	17	MON	38,000

Calculate Exponential Moving Average (EMA) of Sensex during the above period. The 30 days simple moving average of Sensex can be assumed as 35,000. The value of exponent for 30 days EMA is 0.064. Provide analyzed conclusion on the basis of your calculations.

(Calculations should be up to three decimal points.)

**(8 Marks)**

**(C)**

What are some of the innovative ways to finance a start up?

**(4 Marks)**

**Question No. 4**

**(A)**

Mr. X, a financial analyst, intends to value the business of PQR Ltd. in terms of the future cash generating capacity. He has projected the following after tax cash flows :

Year :	1	2	3	4	5
<b>Cash flows (Rs. in lakh)</b>	1,760	480	640	860	1,170

It is further estimated that beyond 5<sup>th</sup> year, cash flows will perpetuate at a constant growth rate of 8% per annum, mainly on account of inflation. The perpetual cash flow is estimated to be Rs. 10,260 lakh at the end of the 5<sup>th</sup> year.

Required:

- What is the value of the firm in terms of expected future cash flows, if the cost of capital of the firm is 20%.
- The firm has outstanding debts of Rs. 3,620 lakh and cash/bank balance of Rs. 2,710 lakh. Calculate the shareholder value per share if the number of outstanding shares is 151.50 lakh.
- The firm has received a takeover bid from XYZ ltd. of Rs. 225 per share. Is it a good offer?

[Given: PVIF at 20% for year 1 to Year 5: 0.833, 0.694, 0.579, 0.482, 0.402]

**(8 Marks)**

**(B)**

XY Limited is engaged in large retail business in India. It is contemplating for expansion into a country of Africa by acquiring a group of stores having the same line of operation as that of India.

The exchange rate for the currency of the proposed African country is extremely volatile. Rate of inflation is presently 40% a year. Inflation in India is currently 10% a year. Management of XY Limited expects these rates likely to continue for the foreseeable future.

Estimated projected cash flows, in real terms, in India as well as African country for the first three years of the project are as follows:

	Year – 0	Year – 1	Year – 2	Year - 3
Cash flows in Indian Rs. (000)	-50,000	-1,500	-2,000	-2,500
Cash flows in African Rands (000)	2,00,000	+50,000	+70,000	+90,000

XY Ltd. assumes the year 3 nominal cash flows will continue to be earned each year indefinitely. It evaluates all investments using nominal cash flows and a nominal discounting rate. The present exchange rate is African Rand 6 to Rs.1.

You are required to calculate the net present value of the proposed investment considering the following:

- (i) African Rand cash flows are converted into rupees and discounted at a risk adjusted rate.
- (ii) All cash flows for these projects will be discounted at a rate of 20% to reflect it's high risk.
- (iii) Ignore taxation.

	Year-1	Year-2	Year -3
PVIF@20%	.833	.694	.579

**(8 Marks)****(C)**

Following is the information about Mr. J's portfolio:

Investment in shares of ABC Ltd.	Rs. 200 lakh
Investment in shares of XYZ Ltd.	Rs. 200 lakh
Daily standard deviation of both shares	1%
Co-efficient of correlation between both shares	0.3

Required:

Determine the 10 days 99% Value At Risk (VAR) for Mr. J' s portfolio. Given : The Z score from the Normal Table at 99% confidence level is 2.33. (Show your calculations up to four decimal points).

**(4 Marks)**

### **Question No. 5**

**(A)**

X Co., Ltd., invested to 1.4.2009 in certain equity shares as below :

<b>Name of Co.</b>	<b>No. of Shares</b>	<b>Cost (Rs.)</b>
M Ltd.	1,000 (Rs. 100 each)	2,00,000
N Ltd.	500 (Rs. 10 each)	1,50,000

In September, 2009, 10% dividend was paid out by M Ltd. and in October, 2009, 30% dividend paid out by N Ltd. On 31.3.2010 market quotations showed a value of Rs. 220 and Rs. 290 per share of M Ltd. and N Ltd. respectively.

On 1.4.2010, investment advisors indicate (a) that the dividends from M Ltd. and N Ltd. for the year ending 31.3.2011 are likely to be 20% and 35%, respectively and (b) that the probabilities of market quotations on 31.3.2011 are as below :

<b>Probability factor</b>	<b>Price / Share of M Ltd.</b>	<b>Price / Share of N Ltd.</b>
0.2	220	290
0.5	250	310
0.3	280	330

You are required to :

- (i) Calculate the average return from the portfolio for the year ended 31.3.2010;
- (ii) Calculate the expected average return from the portfolio for the year 2010 – 11; and
- (iii) Advise X Co. Ltd., of the comparative risk in the two investments by calculating the standard deviation in each case.

**(8 Marks)**

**(B)**

A multinational company is planning to set up a subsidiary company in India (where hitherto it was exporting) in view of growing demand for its product and competition from other MNCs. The initial project cost (consisting of Plant and Machinery including installation) is estimated to be US\$ 500 million. The net working capital requirements are estimated at US\$ 50 million. The company follows straight line method of depreciation. Presently, the company is exporting two million units every year at a unit price of US\$ 80, its variable cost per unit being US\$ 40.

The Chief Financial Officer has estimated the following operating cost and other data in respect of proposed project:

- (i) Variable operating cost will be US \$ 20 per unit of production;
- (ii) Additional cash fixed cost will be US \$ 30 million p.a. and project's share of allocated fixed cost will be US \$ 3 million p.a. based on principle of ability to share;
- (iv) Production capacity of the proposed project in India will be 5 million units;

- (iv) Expected useful life of the proposed plant is five years with no salvage value;
- (v) Existing working capital investment for production & sale of two million units through exports was US \$ 15 million;
- (vi) Export of the product in the coming year will decrease to 1.5 million units in case the company does not open subsidiary company in India, in view of the presence of competing MNCs that are in the process of setting up their subsidiaries in India;
- (vii) Applicable Corporate Income Tax rate is 35%, and
- (viii) Required rate of return for such project is 12%.

CALCULATE the Net Present Value (NPV) of the proposed project in India, assuming that:

- (a) there will be no variation in the exchange rate of two currencies and
- (b) all profits will be repatriated, as there will be no withholding tax.

Present Value Interest Factors (PVIF) @ 12% for five years is as below:

Year	1	2	3	4	5
PVIF	0.8929	0.7972	0.7118	0.6355	0.5674

**(8 Marks)**

**(C)**

How financial goals can be balanced vis-à-vis sustainable growth?

**(4 Marks)**

**Question No. 6**

**(A)**

A Portfolio Manager (PM) has the following four stocks in his portfolio:

Security	No. of Shares	Market Price per share (Rs.)	$\beta$
VSL	10,000	50	0.9
CSL	5,000	20	1.0
SML	8,000	25	1.5
APL	2,000	200	1.2

Compute the following:

- (i) Portfolio beta.
- (ii) If the PM seeks to reduce the beta to 0.8, how much risk free investment should he bring in?
- (iii) If the PM seeks to increase the beta to 1.2, how much risk free investment should he bring in?

**(8 Marks)**

**(B)**

Given is the following information:

	Day Ltd.	Night Ltd.
Net Earnings	Rs. 5 crores	Rs. 3.5 crores
No. of Equity Shares	10,00,000	7,00,000

The shares of Day Ltd. and Night Ltd. trade at 20 and 15 times their respective P/E ratios.

Day Ltd. considers taking over Night Ltd. By paying Rs. 55 crores considering that the market price of Night Ltd. reflects its true value. It is considering both the following options:

- I. Takeover is funded entirely in cash.
- II. Takeover is funded entirely in stock.

You are required to calculate the cost of the takeover and advise Day Ltd. on the best alternative.

**(8 Marks)**

**(C)**

Identify the benefits of Securitization from the angle of Originator.

**(4 Marks)**

**OR**

What are the main problems faced in securitisation especially in Indian context?

**(4 Marks)**