CA FINAL – NOV' 19

SUBJECT- SFM

Test Code – FNJ 7023

(Date :)

(Marks - 100)

Question 1 is compulsory and attempt any 4 questions out of remaining 5

Question 1:

(A)

Mr. Dayal is interested in purchasing equity shares of ABC Ltd. which are currently selling at Rs. 600 each. He expects that price of share may go upto Rs. 780 or may go down to Rs. 480 in three months. The chances of occurring such variations are 60% and 40% respectively. A call option on the shares of ABC Ltd. can be exercised at the end of three months with a strike price of Rs. 630.

(i) Recommend the combination of share and the option which Mr. Dayal should select if he wants a **perfect hedge.** **(2 Marks)**

(ii) Analyze and calculate the **value of option today.** (the risk free rate is 10% p.a.) **(4 Marks)**

(iii) Calculate **the expected rate of return on the option as per Mr Dayal Espectation.** **(2 Marks)**

(B)

The following are the data on five mutual funds:

Fund	Return	Standard Deviation	Beta
A	15	7	1.25
B	18	10	0.75
C	14	5	1.40
D	12	6	0.98
E	16	9	1.50

CALCULATE Reward to **Volatility Ratio** and rank this portfolio using:

- **Sharpe method and**
- **Treynor's method**

assuming the risk free rate is 6%. **(6 marks)**

(C)

EXPLAIN the concept of Bootstrapping and describe the various methods of bootstrapping used by start ups.

(6 marks)

Question 2:

(A)

BA Ltd. and DA Ltd. both the companies operate in the same industry. Both companies are in the process of negotiating a merger through exchange of equity shares. The Financial statements of both the companies for the current financial year are as follows:

Balance Sheet

Particulars	**BA Ltd. (Rs.)**	**DA Ltd. (Rs.)**
Current Assets	14,00,000	10,00,000
Fixed Assets (Net)	10,00,000	5,00,000
Total (Rs.)	**24,00,000**	**15,00,000**
Equity capital (Rs.10 each)	10,00,000	8,00,000
Retained earnings	2,00,000	--
14% long-term debt	5,00,000	3,00,000
Current liabilities	7,00,000	4,00,000
Total (Rs.)	**24,00,000**	**15,00,000**

Income Statement

	BA Ltd. (Rs.)	**DA Ltd. (Rs.)**
Net Sales	34,50,000	17,00,000
Cost of Goods sold	27,60,000	13,60,000
Gross profit	6,90,000	3,40,000
Operating expenses	2,00,000	1,00,000
Interest	70,000	42,000
Earnings before taxes	4,20,000	1,98,000
Taxes @ 50%	2,10,000	99,000
Earnings after taxes (EAT)	**2,10,000**	**99,000**
Additional Information :		
No. of Equity shares	1,00,000	80,000
Dividend payment ratio (D/P)	40%	60%
Market price per share	Rs.40	Rs.15

1. Calculate the **EPS, P/E Ratio, ROE and Book value/ Intrinsic Value Per Share of both companies**. **(6 Marks)**

2. Calculate **future EPS growth rates** for each company. **(2 Marks)**

3. Evaluate the justifiable **equity share exchange ratios** that can be offered by BA Ltd. to the shareholders of DA Ltd. **(2 Mark)**

4. Calculate the **post-merger EPS** based on an exchange ratio of 0.4: 1 being offered by BA Ltd. and indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders. **(2 Marks)**

(B)

An importer booked a forward contract with his bank on 10th April for USD 2,00,000 due on 10th June @ Rs. 64.4000. The bank covered its position in the market at Rs. 64.2800.

The exchange rates for dollar in the interbank market on 10th June and 20th June were:

	10th June	20th June
Spot USD 1=	Rs. 63.8000/8200	Rs. 63.6800/7200
Spot/June	Rs. 63.9200/9500	Rs.63.8000/8500
July	Rs. 64.0500/0900	Rs.63.9300/9900
August	Rs. 64.3000/3500	Rs.64.1800/2500
September	Rs. 64.6000/6600	Rs.64.4800/5600

Exchange Margin 0.10% and interest on outlay of funds @ 12%. The importer requested on 20th June for extension of contract with due date on 10th August.

Rates rounded to 4 decimal in multiples of 0.0025.

On 10th June, Bank Swaps by selling spot and buying one month forward.

CALCULATE:

(i) Cancellation rate

(ii) Amount payable on $ 2,00,000

(iii) Swap loss

(iv) Interest on outlay of funds, if any

(v) New contract rate

(vi) Total Cost **(8 marks)**

Question 3:

(A)

ABC Ltd. has **Rs.** 300 million, 12 per cent bonds outstanding with six years remaining to maturity. Since interest rates are falling, ABC Ltd. is contemplating of refunding these bonds with a **Rs.** 300 million issue of 6 year bonds carrying a coupon rate of 10 per cent. Issue cost of the new bond will be **Rs.** 6 million and the call premium is 4 per cent. **Rs.** 9 million being the unamortized portion of issue cost of old bonds can be written off no sooner the old bonds are called off. Marginal tax rate of ABC Ltd. is 30 per cent. You are required **to analyse the bond refunding decision.**

(6 marks)

(B)

Compare and contrast **startups and entrepreneurship**. Describe the priorities and challenges which startups in India are facing. **(6 marks)**

(C)

The valuation of Hansel Limited has been done by an investment analyst. Based on an expected free cash flow of Rs. 54 lakhs for the following year and an expected growth rate of 9 percent, the analyst has estimated the value of Hansel Limited to be Rs. 1800 lakhs. However, he committed a mistake of using the book values of debt and equity.

The book value weights employed by the analyst are not known, but you know that Hansel Limited has a cost of equity of 20 percent and post tax cost of debt of 10 percent. The value of equity is thrice its book value, whereas the market value of its debt is nine-tenths of its book value. What is the **correct value of Hansel Ltd?** **(8 marks)**

Question 4:

(A)

XYZ Ltd. a US firm will need £ 3,00,000 in 180 days. In this connection, the following information is available:

Spot rate 1 £ = $ 2.00

180 days forward rate of £ as of today = $1.96

Interest rates are as follows:

	U.K.	US
180 days deposit rate	4.5%	5%
180 days borrowing rate	5%	5.5%

A call option on £ that expires in 180 days has an exercise price of $ 1.97 and a premium of $ 0.04.

XYZ Ltd. has forecasted the spot rates 180 days hence as below:

Future rate	Probability
$ 1.91	25%
$ 1.95	60%
$ 2.05	15%

The company has following four choices:

(i) A forward contract;

(ii) A money market hedge;

(iii) An option contract;

(iv) No hedging.

Recommend the alternative (among the four choices mentioned above) that would be preferable by the company. **(10 Marks)**

(B)

DESCRIBE the **constituents of International Financial Centers (IFC).** **(6 marks)**

(C)

Explain any **four features of Value at Risk (VAR).** **(4 marks)**

Question 5:

(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 **(12 marks)**

(B)

Following are the details of a **portfolio** consisting of three shares:

Share	Portfolio weight	Beta	Expected return in %	Total variance
A	0.20	0.40	14	0.015
B	0.50	0.50	15	0.025
C	0.30	1.10	21	0.100

Standard Deviation of Market Portfolio Returns = 10% You are given the following additional data:

Covariance (A, B) = 0.030

Covariance (A, C) = 0.020

Covariance (B, C) = 0.040

CALCULATE:

(i) The Portfolio Beta

(ii) Residual variance of each of the three shares

(iii) Portfolio variance using Sharpe Index Model

(iv) Portfolio variance (on the basis of modern portfolio theory given by Markowitz) **(8 marks)**

Question 6:

(A)

Describe the various **problems faced in Securitization.** **(5 marks)**

(B) Factors considered by a Venture Capitalist before Financing:

(6 marks)

(C)

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.

Analyze 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. **(9 marks)**