CMA SFM Test - 16

[By CA Nagendra Sah]

Mission 80+
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Must Write following details on First page of your Answer sheet.
(1) Name, (2) Mobile Number & (3) Mail ID:
Send scan copy of your answer sheet in PDF format at: ***sfmcertifiedcopy@gmail.com*** *for evaluation.*

Time Allowed – 3 Hours **Maximum Marks – 100**

1.The question paper comprises two parts, Section A and Section B.
2. Section-A Multiple Choice Questions (MCQs) carrying 2 marks each.
3. Section-B comprises questions which require descriptive type answers.

SECTION – A (Compulsory)

Question-1. Choose the correct option:

[15 × 2 =30]

i.	A customer with whom the Bank had entered into 3 months' forward purchase contract for Swiss Francs 10,000 at the rate of ₹ 27.25 comes to the bank after 2 months and requests cancellation of the contract. On this date, the rates, prevailing, are: Spot SF 1 = ₹ 27.30 / 27.35 One-month forward SF 1 = ₹ 27.45 / 27.57 What is the loss/gain to **the bank** on cancellation?	
	A.	Gain of ₹3200
	B.	Loss of ₹3200
	C.	Gain of ₹2,000
	D.	Loss of ₹1,000

ii.	An American multinational corporation has subsidies whose cash positions for the month of September 2018 are given below:	
	Swiss subsidiary : Cash surplus of SF 1,25,00,000 Canadian subsidiary : Cash deficit of Can $ 2,00,00,000 UK subsidiary : Cash deficit of 25,00,000 (UK pound)	
	If Exchange rate are: SF1.48/$, Can$ 1.58/$, $1.5/£. The cash requirements under Decentralized cash management is	
	A.	$ 1,64,08,227.85
	B.	$ 79,62,281.90
	C.	$ 1,26,58,227.85
	D.	None of the above

iii.	Arbitrageur in a foreign exchange market	
	A.	buys when the currency is low and sells when it is high
	B.	buys and sells simultaneously the currency with a view to making riskless profit
	C.	sells the currency when he has a receivable in future
	D.	buys or sells to take advantage of market imperfections

iv.	The current spot exchange rate between the USD and EUR is $1.20 /£ The annual interest rate in the US is 5%, while the annual interest rate in the Eurozone is 2%. The inflation rate in the US is 6%, and the inflation rate in the Eurozone is 1%. According to the Purchasing Power Parity (PPP) theory, what should be the expected spot exchange rate for the USD/EUR six months from now?	
	A.	$1.2178 /£
	B.	$1.2298 /£
	C.	$1.259 /£
	D.	$1.235/£

v.	You are considering an investment of Rs. 15,000 in a mutual fund with a 4% load and an annual expense ratio of 1.25%. You plan to invest for five years. Assume the portfolio rate of return net of operating expenses is 12% annually. What is the value of portfolio after five years?	
	A.	22,500
	B.	23,993
	C.	24,030
	D.	25,377

vi.	Nifty Index is currently quoting at 1330. Each lot is 250. Mr X. purchases a March contract at 1380. He has been asked to pay 10% initial margin. What is the amount of initial margin? Nifty futures rise to 1390. What is the percentage gain?	
	A.	33,250 & 7.5%
	B.	35,000 & 7%
	C.	34,500 & 7.25%
	D.	33,250 & 4.51%

vii.	The portfolio composition of Mr. X is given below: Equity ₹8,00,000 Cash & Cash Equivalent ₹2,00,000 Beta of equity portfolio = 0.69 The current Index future value is 137 with multiple of 100. If Mr. X wants to achieve an overall portfolio beta of 1.10, then how many numbers of futures contract he should go short or Long?	
	A.	Short 40 contracts
	B.	Buy 40 contracts
	C.	Buy 30 contracts
	D.	Buy 24 contracts

viii.	A special contract under which the party of the contract enjoys the right to buy or sell without the obligation to do so is called:	
	A.	Forward Contract
	B.	Option Holder
	C.	Option Writer
	D.	Future Contract

ix.	An investor is seeking the price for a security, whose standard deviation is 4.00 percent. The correlation coefficient for the security with the market is 0.8 and the market standard deviation is 2.2 percent the return from government securities is 5.2 percent and from the market portfolio is 9.8 percent, he can then determine the price to pay for the security. What is the required return on the security?	
	A.	10.89%
	B.	11.89%
	C.	14.54%
	D.	None of the above

x.	You have ₹10,000 to invest in a stock portfolio. Your choices are Stock X with an expected return of 18% and Stock Y with an expected return of 11%. If your goal is to create a portfolio with an expected return of 16.5%, how much money will you invest in Stock X and in Stock Y respectively?	
	A.	7860 & 2140
	B.	2140 & 7860
	C.	7000 & 3000
	D.	6500 & 3500

xi.	Markowitz Mean-Variance Model is used in	
	A.	Modern Portfolio Analysis;
	B.	Traditional Portfolio Analysis;
	C.	Modern Capital Market Analysis;
	D.	None of the above

xii.	ZENITH LTD. as paid a dividend of ₹ 5 per share with annual growth rate of 8%. The expected return on the market portfolio and the risk-free rate of return are estimated to be 15% and 10% respectively. What will be the equilibrium price for the shares of ZENITH LTD., if the market sensitivity index (β) is 1.5?	
	A.	₹56.84
	B.	₹52.63
	C.	₹50.00
	D.	None of the above

xiii.	Eager Ltd. has a market capitalization of 1,500 crores and the current market price of its share is 1,500. It made a PAT of Rs. 200 crores and the Board is considering a proposal to buy back 20% of the shares at a premium of 10% to the current market price. It plans to fund this through a 16% bank loan. You are required to calculate the post buy back Earnings Per Share (EPS). The company's corporate tax rate is 30%.	
	A.	163.0398 crore
	B.	203.80 crore
	C.	249.375 crore
	D.	None of the above

xiv.	What are the four options for dealing with a risk?	
	A.	Accept, Mitigate, Transfer and Avoid
	B.	Accept, Insure, Transfer and Avoid.
	C.	Accept, Mitigate, Reduce and Avoid.
	D.	Situation, Task, Action and Result.

xv.	The major difference between open-ended and close-ended mutual fund schemes is that.....	
	A.	in Open Ended Schemes, investors can only make entry and exit during prespecified intervals.
	B.	Close-ended schemes allow investors to redeem their investments at any time.
	C.	Open-ended schemes have a limited life, while close-ended schemes have an indefinite redemption period.
	D.	Open-ended schemes have an indefinite redemption period, while close ended schemes have a limited life.

SECTION – B

DESCRIPTIVE QUESTIONS

(Answer **any five questions** out of seven questions given. Each question carries 14 Marks.)

14×5=70

2 (a) An exporter requests his bank to extend the forward contract for US$ 20,000 which is due for maturity on 31st October, 2018 for a further period of 3 months. He agrees to pay the required margin for such extension of the contract. **6**

Contracted rate – US$ 1 = ₹62.32

The US Dollar quoted on 31-10-2018:

Spot – 61.5000/61.5200

3 months' Discount – 0.93%/0.87%

Margin money for buying and selling rate is 0.45% and 0.20% respectively.

(i) The cost to the exporter in respect of the extension of the forward contract and

(ii) the rate of new forward contract.

2 (b) Airborne Ltd. wants to take advantage of a new government scheme of connecting smaller towns and wants to purchase one-turboprop airplane at a cost of ₹ 5 crores. It has obtained permission to fly on 4 sectors. **8**

The company had provided the following estimates of its costs and revenues. The cost of capital is 16% and the company depreciates its assets over a period of 25 years on a straight-line basis. Currently it is operating in a 30% tax regime and under the new government scheme it enjoys a 100% tax waiver for the first 3 years.

- Passenger Capacity of the aircraft: 60 passengers
- Expected Operational Capacity: 80%
- Per aircraft no. of trips on a daily basis: 4

	Amount in (₹)
Average realization per passenger	2,000
Annual Cost of Manpower	2,50,00,000
Airport handling charges - Fixed per day	10,000
Annual Repairs and Maintenance	5,00,00,000
Daily Operating Costs	75,000

The costs with the exception of Airport handling charges are expected to increase 10% year on year and the Operational Capacity would go up to 90% from Year 3.

The certainty of achieving the projected cash flows in the first five years are 0.8, 0.9, 0.75, 0.7 and 0.7 and PV at 16% are 0.862, 0.743, 0.641,0.552, 0.476 respectively.

Advise the management on the feasibility of the project, assuming the aircraft operates on all the 365 days in a year.

3. (a) Following are the details of cash inflows and outflows in foreign currency denominations of MNP Co. an Indian export firm, which have no foreign subsidiaries: **7**

Currency	Inflow	Outflow	Spot rate	Forward rate
US $	4,00,00,000	2,00,00,000	48.01	48.82
French Franc (FRF)	2,00,00,000	80,00,000	7.45	8.12

U.K. £	3,00,00,000	2,00,00,000	75.57	75.98
Japanese Yen	1,50,00,000	2,50,00,000	3.20	2.40

(i) Determine the net exposure of each foreign currency in terms of Rupees.

(ii) Are any of the exposure positions offsetting to some extent?

3. (b) Following is the information related to three mutual funds: **7**

Year	MF – A	MF – B	MF – C
2020	10%	5%	14%
2021	8%	10%	10%
2022	12%	8%	18%

Correlation between market and mutual fund:-

	MF – A	MF – B	MF – C
Correlation with market	0.45	0.25	0.65

The variance of the market is 9% and rate of return of government bond is 7%.
You are required to Rank the mutual fund using Sharpe's ratio and Treynor's ratio.

4. (a) The spot price of a share of Bevel Ltd. is ₹ 356 with a face value of ₹ 10 per share. The 3 months' futures contract is ₹ 386 per share. **6**

Other features of the contract and the related information are as follows:

(i) Time to expiration of the contract is 3 months.
(ii) Annual dividend of the stock of 30% is payable after 3 months.
(iii) Borrowing rate is 20% p.a. continuously compounded.

Based on the above information, as an investor, you are required to calculate the theoretical forward price for Bevel share. Also explain whether any arbitrage opportunity exists or not.

4. (b) Following are the details of a portfolio consisting of three shares: **8**

Share	Portfolio weight	Beta	Expected return in %	Total Variance
A	0.30	0.50	15	0.020
B	0.50	0.60	16	0.010
C	0.20	1.20	20	0.120

Standard Deviation of Market Portfolio Returns = 12%

Calculate the following:

(i) The Portfolio Beta.

(ii) Residual variance of each of the three shares.

(iii) Portfolio variance using Sharpe Index Model

5. (a) The following information is available in respect of dividend, market price and market condition after one year. **7**

Market condition	Probability	Market Price (₹)	Dividend per share (₹)
Good	0.25	115	9
Normal	0.50	107	5
Bad	0.25	97	3

The existing market price of an equity share is ₹ 106 (F.V. ₹ 1), which is cum 10% bonus debenture of ₹6 each, per share. M/s. X Finance Company Ltd. had offered the buy-back of debentures at face value.

Find out the expected return and variability of returns of the equity shares.

5. (b) An investor purchased Reliance November Futures (600 shares Tick Size) at ₹ 1,150 and write a ₹ 1,190 November Call option at a premium of ₹10 (600 shares Tick Size). As on November 25, spot price rises and so the futures Price and the call Premium also rise. Futures Price rises to ₹ 1,180 and call premium rises to ₹16. Brokerage is 0.045% for the transaction value of futures and strike price net of call premium for option. **7**

Find out the Profit/loss of the investor, if he/she settles the transaction on that date and at stated prices. (Assuming no transaction taxes and service taxes exist.)

6. (a) The risk-free rate of return (Rf) is 8 percent and the expected rate of return on market portfolio (Rm) is 12 percent. The expected rate of growth for the dividend of J Ltd. is 6 percent. The last dividend paid on the equity stock was ₹5.00. The beta of J Ltd. equity stock is 1.5. **6**

(i) What is the equilibrium price of the equity stock of J Ltd.?

(ii) Evaluate the impact of following factors jointly on the equilibrium price of equity stock of J Ltd.

- the inflation premium increases by 2 percent;
- the expected growth rate increases by 2 percent in absolute terms;
- the beta of J Ltd. equity rises to 1.8 and
- market return remains the same.

6. (b) **Company A** has outstanding debt on which it currently pays fixed rate of interest at 9.5%. The company intends to refinance the debt with a floating rate interest. The best floating rate it can obtain is LIBOR + 2%. However, it does not want to pay more than LIBOR. **Another company B** is looking for a loan at a fixed rate of interest to finance its exports. **8**

The best rate it can obtain is 13.5%, but it cannot afford to pay more than 12%. However, one bank has agreed to offer finance at a floating rate of LIBOR + 2%. Citibank is in the process of arranging an interest rate swap between these two companies.

(i) With a schematic diagram, show how the swap deal can be structured,

(ii) What are the interest savings by each company?

(iii) How much would Citi bank receive?

7. (a) M/S. Corpus an AMC, on 1.04.2015 has floated two schemes viz. Dividend Plan and Bonus Plan. Mr. X, an investor has invested in both the schemes. The following details (except the issue price) are available: **8**

Date	Dividend (%)	Bonus Ratio	NAV	
			Dividend Plan	Bonus Plan
1.04.2015			?	?
31.12.2016		1:4 (One unit on 4 units held)	47	40
31.03.2017	12		48	42
31.03.2018	10		50	39
31.12.2018		1:5 (One unit on 5 units held)	46	43
31.03.2019	15		45	42
31.03.2020	-	-	49	44
Additional details:				

Investment (₹)	₹ 9,20,000	₹ 10,00,000		
Average Profit (₹)	₹27,748.60			
Average Yield (%)		6.40		

You are required to calculate the issue price of both the schemes as on 1.04.2015.

7. (b) Company X is forced to choose between two machines A and B. The two machines are designed differently but have identical capacity and do exactly the same job. Machine A costs ₹ 1,50,000 and will last for 3 years. It costs ₹ 40,000 per year to run. Machine B is an 'economy' model costing only ₹ 1,00,000, but will last only for 2 years, and costs ₹ 60,000 per year to run. These are real cash flows. The costs are forecasted in rupees of constant purchasing power. Ignore tax. Opportunity cost of capital is 10 per cent. Which machine company X should buy? **6**

8. (a) Write a short note on: Non-Fungible Tokens (NFTs). **5**

8. (b) What do you mean by ADR? Discuss its advantages and limitations **5**

8. (c) Briefly illustrate various steps in a risk management process. **4**