

AFM/SFM Test-4

Mission 80+ in AFM/SFM for Nov/Dec 2024 attempt

Time Allowed – 75 Min (1.25 Hr)

Maximum Marks - 40

All Questions are Compulsory.

Working Notes should form part of the respective answer.

PART I – Case Scenario based MCQs (12 Marks)

In our CA Final AFM paper / CMA Final SFM Paper conducted by Institute, it is not required to show the working for MCQs. However, for our test series, we highly recommend that students provide detailed workings. This allows us to better evaluate your preparation and understanding of the concepts.

Case Scenario: I

1. An investor purchased. Reliance November Future (500 shares Tick size) at ₹642 and write a ₹680 November call option at a premium of ₹ 6 (500 shares Tick size). As on November 20, spot price rises to ₹650 and so the future price rises to ₹ 675 and call premium rises to ₹ 12. Find out profit/loss of the investor, if he/she settles the transaction on that date and at stated prices. Brokerage is 0.05% for the transaction value of futures and strike price net of call premium for option.
- (i) Net Profit from **Future contract** is 2M
(a) Gain of 16,170.75 (b) Gain of 16,500
(c) Gain of of 3,677 (d) Gain of 16,331.25
- (ii) Net Profit from square-off of **call option** is 2M
(a) Gain of 3,000 (b) Loss of 3,000
(c) Loss of 3,335.50 (d) Loss of 3,340
- (iii) **Overall** Net Profit or Loss to the Investor is 1M
(a) Gain of 12,830.75 (b) Gain of 13,170.75
(c) Gain of 12,835.25 (d) None of the above
- (iv) On 20th November, the call option is 1M
(a) in the money (b) out of the money
(c) at the money (d) Insufficient data

Case Scenario: II

1. Following is the data regarding six securities:

	A	B	C	D	E	F
Return (%)	10	10	15	5	11	10
Risk (%) (Standard Deviation)	5	6	13	5	6	7

- (i) Which of the securities will be selected? 2M
 (a) C, E & F (b) B, C & F
 (c) A, B & F (d) A, C & E
- (ii) Assuming perfect correlation, Risk of Portfolio having investment of 80% in security A and 20% in security-C will be 2M
 (a) 0.04356 (b) 0.2087
 (c) 6.6% (d) None of the Above
- (iii) Assuming perfect correlation, which of the following is most beneficial 2M
 (a) Invest 100% in E (b) Invest 100% in B
 (c) Invest 80% in security A and 20% in security C (d) invest 50% in B & 50% in E

PART II – Descriptive Questions (28 Marks)

1. An investor has a sum of ₹20 lacs with which he wishes to construct a portfolio of securities ABC and XYZ. The following information is provided: 7

Security	Expected Return	Standard Deviation
ABC	18	10
XYZ	20	15

The coefficient of correlation between the returns of X and Y is 0.6.

- (i) How much should he invest in X and Y in order to have a portfolio of minimum variance: What would be this minimum variance?
- (ii) If he invested equally in X and Y, what would be the variance of the portfolio?
- (iii) Would you consider his portfolio in (i) and (ii) sufficiently diversified? Why?
2. Mr. Potential has made investments in two mutual funds. The following information is available: 7

Mutual Fund	Mid Cap	Small Cap
Jensen Alpha	0.011	0.015
Treynor's Ratio	0.0714	0.0775
Actual Return	8.50%	9.10%
Risk Premium	4%	

You are required to calculate:

- (i) Beta (β) for both the funds
 (ii) Risk free Rate
 (iii) Security Market Line

3. Mr. Pritam, a school teacher, after retirement has built up below portfolio:

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Security	No. of shares	Price/Share	β
ABC Ltd.	1000	50	0.9
DEF Ltd.	500	20	1.0
GHI Ltd.	800	25	1.5
JKL Ltd.	200	200	1.2

His portfolio consultant Mrs. Geeta has advised her to bring down the beta to 0.8. You are required to compute:

- Present portfolio beta
- How much risk-free investment should be bought in, to reduce the beta to 0.8? what will be the new portfolio?

4. Tara Ltd is planning to import multipurpose machine from USA at a cost of \$25,000. The company can avail loans at 15% Interest per annum with quarterly rests with which it can import the machine. However, there is an offer from New York branch of an Indian based bank extending credit of 180 days at 2% per annum against opening of an irrevocable letter of credit.

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Other Information:

Spot rate US\$ 1 = ₹ 85

180 days forward rate US \$ 1 = ₹ 87

Commission charges for letter of credit at 2% per 12 months.

- Justify why the offer from the foreign branch should be accepted?
- Based on the present market condition company is not interested to take the risk of currency fluctuations and wanted to hedge with an additional expense of ₹40,000, if so, what is your advice to the company?

Assume 360 days in the year.