

**K.J. Somaiya Institute of Management Studies & Research**

**Course: PGDM FS Tri III (2018 – 20)**

**Sub: Portfolio and Investment Management**

**Date of Exam: 5/04/2019**

**Time: 3 Hours**

**Marks: 50**

**Please Note:**

- 1. Section A is compulsory. It carries 20 marks.**
- 2. Each question in Section B carries 15 marks. Attempt any two.**
- 3. The exam is Excel-based. Explanations and conclusions should be written in text box in the final solution worksheet.**
- 4. All solutions should be saved in a single file across worksheets.  
Solutions in multiple files will not be evaluated.**

## **SECTION A**

Q1. Use the case text provided in hard copy and the case spreadsheet in file Q1 to:

- a. Calculate minimum variance portfolio for each of the following combinations (use anticipated annual returns and historical annualized standard deviation) : (MM : 13)**
  - i. Kinross Gold and Delphi
  - ii. Kinross Gold and Groupon
  - iii. Kinross Gold and KelloggComment on the result.
  
- b. Comment, using CAPM, whether each of the four stocks short-listed as investment candidate for the Cavalier Fund is overvalued or undervalued ( use risk-free rate = 2.34 percent and market risk premium = 6 percent, Value Line beta**

*estimates and anticipated annual returns given in the case).*  
**(MM : 12)**

## SECTION B

**Q2. Which portfolio to invest in? (MM: 15)**

MLN Ltd. is a firm that offers PMS services to high net worth individuals. The management of the firm has decided to come up with a blue-chip portfolio for their client. On the basis of bottom-up analysis, the firm’s team has identified 15 scrips (given below) and obtained the price data to evaluate the risk-return characteristics of each.

1	SBI
2	ITC
3	HDFC Bank
4	Zee Ltd.
5	Maruti Ltd.
6	Sun Pharma
7	Wipro
8	Tech Mahindra
9	Infosys
10	ONGC
11	JSW Steel
12	CIPLA
13	Asian Paints
14	Reliance
15	TCS

All scrips chosen as candidate securities for the portfolio were market leaders in their own right. However, a portfolio comprising 15 stocks might be too diversified. So the team tried to further prune its list and reduce the number of candidate stocks to ensure that the diversification is ‘adequate’. After much debate, it was decided to make a 6-security portfolio.

You have to evaluate the 15 stocks in terms of their individual risk, return and interactive risk and do the following using data given in file ‘Q2’ for the purpose ( risk-free rate = 7.8 per cent) :

- a. Identify 6 stocks to create the portfolio
- b. Calculate proportions, risk and standard deviation of minimum variance 6 stock portfolio
- c. Calculate proportions, risk and standard deviation of optimal risky 6 stock portfolio.

**Q3. Find the value range  
15)**

**(MM:**

Aditya is an analyst with PRC Ltd. The firm specializes in equity research. As the Indian economy has grown, the movement of goods from one part of the country to another has increased considerably. The freight transportation companies have been performing well, despite the rising fuel costs. With the new government coming in, the outlook for freight transport companies has improved. Fuel price cut in the recent times is being taken as a very positive sign by the market. Aditya has been in search of a new sector to invest in and the freight transportation sector attracts his attention. After detailed analysis of the sector, he decides to analyze Deccan Freight Ltd. further. The company has a large market share, innovative and visionary top management team and very positive image as reliable and trustworthy freight movers. Help Aditya compute the intrinsic value range for Deccan Freight Ltd. using the financial information given in file ‘Q3’ (the data is hypothetical and grouped for ease of analysis) to decide at what price he should buy the share.

**Q4. Investing rationally  
15)**

**(MM:**

Generate, graphically illustrate and explain the significance of the point of tangency between Markowitz efficient frontier and Tobin’s enhanced efficient frontier in a two-security case. Use the data in the file ‘Q4’ (risk-free rate = 7.8 per cent).

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