K.J. Somaiya Institute of Management Studies & Research

Course: PGDM Finance Tri IV

Sub: SAPM

Date of Exam: 18/09/2019 **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 hardcopy and spreadsheet given in dataset to answer the following questions:

a. Estimate and compare the annualized returns and risk of Reynolds and Hasbro with that of the S&P 500 Index. Which stock appears to be the riskiest?

b. Suppose Sharpe's position had been 99% of equity funds invested in the S&P 500 and either 1% in Reynolds or 1% in Hasbro. Estimate the resulting portfolio position. How does each stock impact the risk of the equity investment?

c. Perform a regression of each stock's monthly return on the Index return to compute a 'beta' for each stock.

(MM : 6,7,7)

SECTION B

Q2. **Portfolio Creation**

Construct a six-security minimum variance portfolio using the stock price information given in data file. Explain the concept of minimum variance portfolio and its importance in MPT.

(MM : 15)

Q3. Use data given in the data file to chart capital market line for two security portfolio, using a risk-free rate of 6.5%. Comment on the point of tangency between efficient frontier and CML.

(MM : 15)

Q4. Use the information given in data file to determine which securities are overvalued, undervalued or fairly valued. The risk-free rate is 6.5%. Market return may be computed from the index data provided for the purpose and beta of each stock should be calculated through regression.

(MM : 15)