

MAJOR EXAM – MAY 2017
MSL873: Security Analysis and Portfolio Management (SAPM)

Time: 2 hours

Marks: 35

I. Write notes on the following:

- a. SEBI;
- b. Listing of shares;
- c. Marketability of securities;
- d. Life cycle approach for industry analysis;
- e. Portfolio formation with excess return-to-beta ratio.

(2X5=10 Marks)

II. Recommend what the investors X, Y and Z should do if their risk tolerance is 30, 50 and 70 respectively. Return and risk data are as follows:

	A	B	C	D	E	F	G	H
r	10	11	12.5	12.8	13.2	13.7	14	14.2
σ	5	6	6.5	7	7.5	7.6	8	8.5

(8 Marks)

III. A. Using Naïve diversification, write the expression for portfolio return(r_p) and risk(σ_p) if the number of securities is N.

(2 Marks)

B. Find, by derivation, the proportions of each security for the minimum risk of a 2-security portfolio.

(3 Marks)

C. Calculate the return (r_p) and the possible maximum and minimum risk (σ_p) for the portfolio, consisting of two securities with following risk and return:

$$\begin{aligned} r_1 &= 10, & r_2 &= 15 \\ \sigma_1 &= 6, & \sigma_2 &= 7.5 \\ X_1 &= 0.4, & X_2 &= 0.6 \end{aligned}$$

(2 Marks)

IV. How many minimum shares should the minority group have out of a total of 1000 shares if it wants to have at least two out of seven directors elected in a cumulative voting system?

(2 Marks)

V. A. Calculate the price and MD for the following data and interpret it:

$$F = \text{Rs } 1000$$

$$N = 5 \text{ years}$$

$$\text{Coupon} = \text{Rs } 80 \text{ per year}$$

$$\text{YTM} = 9\% \text{ pa}$$

(4 Marks)

B. Find out all possible future likely interest rates that can be inferred, if the current interest rates are as given below:

a. 8% pa for a one-year bond (r_{01})

b. 8.2% pa for a two-year bond (r_{02})

c. 8.5% pa for a three-year bond (r_{03})

(4 Marks)

Handwritten calculations:

$77.75449541 \rightarrow 2$

135.6687989

185.9240352

226.8960875

259.9725555

3249.656972

805

67.33439946

61.77467841

56.67401689

51.9945109

311.1721011