VPM's
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Programme: PGDM (2018-20) (Finance)
PGDM Trimester IV Examination September 2019

Subject	Security Analysis & Portfolio Management (SAPM)		
Roll No.		Marks	60 Marks
Total No. of Questions	7	Duration	3 Hours
Total No. of printed pages		Date	30-09-2019

Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.

Q1) 20 Marks (Compulsory)　　[15 + 5]

a) Calculate portfolio Risk from the following information. Weight of stock A in the portfolio is 0.4 and that of stock B is 0.6.

Stock	σ
A	4%
B	16%

Assume the correlation coefficient (r) between the 2 stocks is: (solve 3 cases differently)
i) 0
ii) 0.5
iii) -0.5

[15 Marks]

b) Write your observations on the above calculation of portfolio risks & the impact of correlation coefficient on the portfolio risk figure　　　　**[5 Marks]**

Attempt Any FOUR from the Remaining SIX Questions

Q2) *Any two from (a) or (b) or (c) ——————— (5x2) = 10 Marks*

a) Draw a diagram of Head & Shoulders pattern & inverse Head & Shoulders pattern & briefly explain them

b) List down the objectives & constraints of an investor? What is the difference between Tactical Asset Allocation & Strategic Asset Allocation?

c) Explain the Risk Tolerance Level table based on Risk Taking Ability & Willingness to Take the risk

Q3) *Any one from (a) or (b)* ——————— *(10x1) = 10 Marks*

a) Calculate the average return, standard deviation, variance & coefficient of variation of the following 2 securities:

Probability	RIL Return	TCS Return
0.3	-10%	1%
0.1	5%	15%
0.4	20%	-7%
0.2	2%	-8%

b) Calculate the expected rate of return as per CAPM & draw SML to identify Undervalued/Overvalued securities
Return on government's risk-less security is 5%

Security	Beta	Average Return
A	1	11 %
B	1.5	4 %
C	0.5	6 %
D	2	17 %
Nifty (Market Portfolio)	1	10 %

Q4) *Any one from (a) or (b)* ——————— *(10x1) = 10 Marks*

a) Calculate the co-variance, coefficient correlation, Beta of Tata Steel :

Year	Tata Steel	BSE – Sensex
1	18%	12%
2	-2%	0%
3	13%	18%
4	-2%	-5%
5	8%	8%

If return on Treasury Bonds is 7%, calculate the expected return as per CAPM & Jensen's Alpha

b) Write whether the following statements are True or False (Just write True or False; don't rewrite the entire sentence)

i) Beta of Market Portfolio is always 0

ii) Capital Allocation Line (CAL) is called as "New Efficient Frontier"

iii) If asset prices are reflecting all publicly available information then the market is said to be in weak form of efficiency.

iv) Jenson's Alpha is also called as an 'Excess or Extra-ordinary Return"

v) Bollinger Bonds consider measure of Volatility of the asset price

vi) Relative Strength Index (RSI) above 70 indicates Oversold Position

vii) Capital Market Line (CML) has Beta on the X axis

viii) Fundamental Analysis does not use any qualitative analytical tools

ix) Higher the correlation between the 2 securities, lower will be the risk reduction benefit derived from combining them

x) Arbitrage Pricing Theory (APT) is a type of Single Factor Model

Q5) *Any one from (a) or (b) —————— (10x1) = 10 Marks*

a) The Calculate portfolio return & portfolio beta from the following data.

Stock	E (R)	Beta
X	-5%	0.2
Y	20%	1.4
Z	12%	0.6

You may assume that the weight of securities x, y & z in the portfolio are 0.3, 0.1 & 0.6 respectively.

b) A From the following information, ascertain the risk of the portfolio —

Securities	Standard deviation	Proportion in Portfolio
A	8%	0.30
B	12%	0.50
C	6%	0.20

Correlation Co-efficient:

A & B = 0.50   B & C = - 0.40   A & C = + 0.75

Q6) *Any one from (a) or (b) —————— (10x1) = 10 Marks*

a) Calculate the Sharpe ratio, Treynor ratio & M-squared measure from the following information & comment which security is better

	A	B	Sensex
E (Rp)	15 %	20 %	12%
σp	10 %	12 %	8%
Bp	1.2	1.8	1
Rf	6%		

b) Calculate weights of securities for Index based on
i) Price Weighted Index   ii) Market Cap Weighted Index   iii) Free Float Market Cap Weighted

Security	No. of instruments	Price	Free Float Factor
A	10	3,000	0.4
B	250	250	0.5
C	300	50	0.3
D	15	1,500	0.4

Q7) *Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks*

a) Explain 6 Principle (Tenets) of Dow Theory

b) Write a short note on Total Risk & its classification into Systematic & Unsystematic

c) Distinguish between Fundamental Analysis & Technical Analysis