

**K.J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND  
RESEARCH VIDYANAGAR, VIDYAVIHAR, MUMBAI -400 077**

**PGDM Executive Trimester - IV (2017-2018)**

**End Term Examination**

<b>Subject: Investment Management</b>	<b>Specialization: Finance</b>
<b>Date of Exam: 17<sup>th</sup> September 2018</b>	<b>Marks: 50</b>
<b>Duration: 3 Hours</b>	<b>Time: 10.30a.m -1.30p.m</b>

**Instructions**

**Q1 (a & b) is compulsory and would carry 20 marks.** Attempt any three out of the remaining Questions. Please Attach Charts with main Answer Sheet.

**Q.1) (10 Marks)**

**a)** What is the optimum portfolio in choosing among the following securities and assuming the risk –free return is 8% and variance in the market index ( $\sigma^2_m$ )= 12%

Security	Expected Return	Beta	Security's unsystematic risk
SBI	20	1.0	40
RBL	18	2.5	35
ITC	12	1.5	30
IDBI	16	1.0	35
ICICI	14	0.8	25
MRPL	10	1.2	15
TV Today	17	1.6	30
NDTV	15	2.0	35

**b)** Reliance Mutual fund has recently come out with NFO, they have raised Rs 1 cr for this scheme. The objective of scheme is to invest in both equity and debt. You have to provide guidelines to Fund Manager for designing a portfolio of this scheme and devise the strategy for various possibilities of Risk and Reward. **(10 Marks)**

**Q.2) Attempt Any 2 questions (10 Marks)**

**a) The Following data are available to you as a portfolio manager**

Security	Return	Beta	Standard Deviation
Infosys	0.32	1.7	0.5
TCS	0.3	1.4	0.35
Wipro	0.25	1.1	0.4
HCLTech	0.22	0.95	0.24
Mind Tree	0.2	1.05	0.28
First Source	0.14	0.7	0.18
XYZ Composite Index	0.12	1	0.2
T-Bills	0.08	0	0

**In terms of a security market line, which of the securities listed above are undervalued?**

(5 Marks)

b) Suppose the standard deviations, betas and average rates of return of several managed portfolio are given below, along with standard deviation and average rate of return of the market index. The beta of the index is assumed to be 1. Further assume the T-bills rate averaged 7% during the time period performance measurement. Compare these funds on performance using the Sharpe, Treynor and Jensen Measure.

Fund	Average Return	Std. Deviation	Beta
A	0.15	0.25	1.25
B	0.12	0.3	0.75
C	0.1	0.2	1
Market	0.12	0.25	1

(5 Marks)

c) What are Assumptions of CAPM (Any 5)

(5 Marks)

**Q.3) Attempt Any 2 questions**  
**Marks)**

(10

a) An investor has a choice of four stocks for investment. Their rates of return and probabilities are as follows

A		B		C		D	
Return (%)	Probability (%)	Return (%)	Probability (%)	Return (%)	Probability (%)	Return (%)	Probability (%)
-30	20	-20	15	-20	20	-10	10
0	40	0	35	10	40	0	25
30	30	20	45	40	30	10	40
70	10	40	5	80	10	20	25

Are all these stocks attractive investments? Give Reasons  
**Marks)**

(5

b) "The Indian stock market is efficient" Discuss  
**Marks)**

(5

c) Consider a portfolio of four securities with the following characteristic

Security	Weighting	$\alpha_i$	$\beta$	Residual variance( $\sigma_{ei}^2$ )
RIL	0.2	2	1.2	320
ONGC	0.3	1.7	0.8	450
Cairn India	0.1	-0.8	1.6	270
BPCL	0.4	1.2	1.3	180

Calculate the return and risk of the portfolio under single index model, if the return on market index is 16.4% and the standard deviation of return on market index is 14%  
**(5 Marks)**

**Q.4) Attempt Any 2 questions**  
**Marks)**

(10

a) The following parameters apply to stocks Y and Z

	Stock Y	Stock Z
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Expected return	20	30
Expected Variance	16	25
Covariance YZ	20	

Is there any Advantage to holding a combination of Y and Z? **(5 Marks)**

**b)** A Portfolio consists of 3 securities 1, 2, and 3. The proportions of these securities are  $w_1=0.3$ ,  $w_2=0.5$ ,  $w_3=0.2$ . The standard deviations of returns on these securities (in percentage terms) are  $\sigma_1=6$ ,  $\sigma_2=9$  and  $\sigma_3=10$ . The correlation coefficients among security returns are  $\rho_{12}=0.4$ ,  $\rho_{23}=0.7$ ,  $\rho_{13}=0.6$ . What is the standard deviation of portfolio return? **(5 Marks)**

**c)** What are the External Factors (Global factors) which affect Indian Markets? Explain with examples. **(5 Marks)**

**Q.5) Attempt Any 2 questions (10 Marks)**

**a)** Two Portfolios were constructed, one considering of equity shares and other consisting of debentures. The rupee value of equity shares, at the time of constructing the portfolio was Rs 1,20,000-(at the rate of Rs 100/- per share) and that of the debentures was Rs 80,000/-.The investor opts to use constant rupee plan and fixes a revision point of 10%.The Share prices show fluctuations at periodical intervals as under.

Period	Share Price( Rs)
1	100( at the start i.e. at the time of constructing the portfolio)
2	90
3	85
4	75
5	80
6	95

Explain the portfolio revision pattern of the investor. **(5 Marks)**

**b)** Discuss Broad guidelines for Analyzing IT sector and IT Companies globally? Indicate current outlook on the sector. **(5 Marks)**

**c)** The Daily prices of the Rico Auto and Index for the period of 5<sup>th</sup> October 2017 to 16<sup>th</sup> October 2017

Date	Index(X)	Rico Auto
5th October	904.95	597.8
6th October	845.75	570.8
7th October	874.25	582.95
8th October	847.95	559.85
9th October	849.1	554.6
12th October	835.8	545.1
13th October	816.75	519.15
14th October	843.55	560.7
15th October	835.55	560.95
16th October	839.5	597.4

**Is the Stock Rico Auto Volatile? Comment**

**(5 Marks)**

**Q.6) Attempt Any 2 questions**

**(10 Marks)**

**a) Historical Stock Prices** charts are provided to you, Provide suitable Recommendation for the stock with proper justification for the same and also indicate what you will be your recommendation for stock at the **last traded price**.

- a) Identify using Candle Stick Pattern and Describe the Pattern –**Refer Chart-1-Axis Bank**
- b) Using Bollinger Band and Describe Bollinger Band- **Refer Chart-2- Tata Motors**
- c) Using Relative Strength Index and Describe the indicator- **Refer Chart -3-Tata Steel**
- d) Using 2 Moving Averages 21 Day-Exponential and 50 Day Moving Averages–**Refer Chart-4-Titan**
- e) Using Moving Average Convergence Divergence and Describe the indicator- **Refer Chart-5-ACC**

**b) Explain the impact of increase in Brent Crude Oil on various Sectors.**

**(5 Marks)**

**c) Distinguish between Investor and Speculator.**

**(5 Marks)**