Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER 3 – EXAMINATION – SUMMER 2016

Subject Code: 2830203   **Date: 09/05/2016**
Subject Name: Security Analysis and Portfolio Management
Time:10.30 AM TO 01.30 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q1	Answer the following multiple choice questions:	**06**

Which of the following terms represent an upper price limit for a stock based on the quantity of the willing seller?

1.
A.	Support	B.	Trend line
C.	Resistance	D.	Channel

A main difference between real and nominal return proceeds is that,

2.
A.	A real return adjust for inflation and nominal return do not	B.	Real return use actual cash flows and nominal use expected cash flows
C.	Real return adjust for commissions and nominal returns do not	D	Real returns show highest possible return and nominal show lowest possible return

Non-systematic risk is further more identified as

3.
A.	No diversifiable risk	B.	Market risk
C.	Random risk	D.	Company specific risk

Suppose you have 20 stocks and you want to derive efficient frontier, how many co-variances do you have to calculate?

4.
A.	90	B.	190
C.	20	D.	400

Mr X is just retired as a government officer. Which investment would grade upper most with regard to protection is,

5.
A.	Preferred stock	B.	Real estate
C.	Common stock	D.	Government bonds

Consider two stock in portfolio A and B

	E (R)	S.D.
A	15%	10%
B	20%	30%

If the returns of the two stocks perfectly negatively correlated what is the weightage of two stocks that risk of portfolio driven down to zero?

6.
A.	75% and 25%	B.	60% and 40%
C.	80% and 20%	D.	66.67% and 33.33%

Q.1	**(b)**	Explain the meaning of the following terms:	**04**

1. Circuit breaker
2. Anchoring
3. Short sell
4. Regret aversion

Q.1 **(c)** Write a note of IPO investments.   **04**

Q.2 **(a)** Define investments. Discuss the various marketable and non-marketable investment avenues available to investors.   **07**

(b) What do you mean by efficient market hypothesis? Also explain the forms of market efficiency.   **07**

<div align="center">OR</div>

(b) A highly volatile stock earns the following returns over six year periods $R_1= 10\%$, $R_2= 30\%$, $R_3=15\%$, $R_4=-0.12$, $R_5=35\%$, $R_6=12\%$ **07**

Calculate and interpret the following values:
1. Arithmetic mean
2. Cumulative wealth index
3. Standard deviation

Q.3 **(a)** What are the basic assumption and inputs required for CAPM? Explain CML and SML. Also establish intra-relation between them.   **07**

(b) The earning of a company has been growing at 15% over the past several years and is expected to increase at this rate for next seven years and thereafter at 9% in perpetuity it is currently earning Rs 4 per share and paying Rs 2 per dividend. What shall be present value of share with discount rate of 12% for the first seven years and 10% thereafter?   **07**

<div align="center">OR</div>

Q.3 **(a)** Select an industry of your choice and do the industry analysis in the current economic scenario.   **07**

(b) The following table gives analyst expected return on two stocks for particular market: **07**

Market return	Aggressive stock	Defensive stock
8%	3%	10%
25%	40%	20%

1. What are the betas of the stocks?
2. What is the expected return on each stock if market return is equally likely to be 8% and 25%?
3. If the risk free rate is 9% and market return is equally likely to be 8% or 25%, what is SML?
4. What is the alpha of two stocks?

Q.4 **(a)** Write a note on the following: **07**
1. Technical analysis
2. Dow theory and components

(b) The rates of return on stock X and market portfolio for last 12 months are given below: **07**

Month	1	2	3	4	5	6	7	8	9	10	11	12
Return on stock (%)	13	17	24	15	14	18	16	6	10	13	14	20
Return on market (%)	14	13	12	7	9	15	18	7	3	16	8	10

1. Calculate and interpret the beta stock – X.
2. What is characteristic line for stock – X?

OR

Q.4 **(a)** Write a note on the following: **07**
1. Single index model
2. Arbitrage pricing theory

(b) Calculate the systematic and unsystematic risks for the given securities from the following data.   **07**

	Average Return (%)	Standard deviation	Beta
Tata power	33.90	126.34	0.36
Mahindra & Mahindra	25.09	106.70	0.74
Market index (Nifty)	28.63	39.52	1
Correlation coefficient	0.90		
r^2	0.81		

Q.5 Mr. X has recently completed MBA Finance from GTU as major in finance and he has been hired as a financial planner by a leading financial corporation. His boss has assigned him the task of investing Rs 10,00,000 for a client who has been asked to consider only the following investment alternatives, Stock A and Stock B.   **14**

The research wing of the company has developed the probability distribution for the state of the economy and estimated value of rate of return under each state of economy. The following information is available for your research purpose:

State of Economy	Probability	Stock A	Stock B
1	0.20	5	20
2	0.30	15	14
3	0.40	18	35
4	0.10	02	10

1. What are expected returns and standard deviations of returns for stock A and B? What is your recommendation of client in terms of variability for the two stocks? Which stock is more consistent? Justify your answers.

2. If correlation coefficient of two stocks is 0.80 and investor wants to invest 40% in stock A and remaining in stock B, what is the expected return and risk of the portfolio of the two stocks?

OR

Q.5   Consider the following information for three mutual funds, X, Y and Z   **14**
and the market.

	Mean return	S.D.	Beta
X	15%	20%	0.90
Y	17%	24%	1.10
Z	19%	27%	1.20
Market index	16	20	1.00

The mean risk free rate was 10%.

1   Calculate the Treynor measure, Sharpe measure and Jensen measure for the three mutual funds and the market index.
2   Explain the real life application of the Treynor measure, Sharpe measure and Jensen measure with reference to the above question.

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