

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER -- 3 – EXAMINATION – WINTER 2018**Subject Code: 3539223****Date: 11/12/2018****Subject Name: Security Analysis & Portfolio Management (SAPM)****Time: 10:30 AM to 1:30 PM****Total Marks: 70****Instructions:**

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

- Q.1** Explain the following terms: **14**
- (a) Beta
 - (b) Margin Trading
 - (c) Circuit
 - (d) Settlement Cycle
 - (e) Market Breadth
 - (f) Doji Candle
 - (g) Relation between Volume and Stock Price
- Q.2 (a)** Calculate the intrinsic value of the share from the following data: **07**
- National Hydro Power Corporation Ltd. (NHPC) paid a dividend of Rs.5 per share. Dividend is expected to grow at 5% per year. The beta of the stock is 1.2. The return on the market is 12%. The risk-free rate of return is 4%.
- (b)** Distinguish between Investment and Speculation. **07**
- OR**
- (b)** Explain the various tenets of Dow Theory. **07**
- Q.3 (a)** How does technical analysis differ from fundamental analysis? **07**
- (b)** Mr. Arjun received a bonus of Rs.50,000 from his company. He wants to invest the money in two stocks. After a careful study of the stock market, he selects RBL Bank and GMDC. The expected return in RBL Bank is 14% and the standard deviation of return is 22%. **07**
- The return from GMDC is slightly higher at 16% and at the same time the standard deviation of return is also higher, being 25%. The correlation coefficient is 0.50. Help him to build a minimum risk portfolio.
- OR**
- Q.3 (a)** You have Rs.1000 par value 6% annual coupon bond matures in 2 years yielding 6.20%. Calculate bond's modified duration and expected percentage change in bond price given a 0.50% decrease in yield. **07**
- (b)** Differentiate between Capital Market Line and Security Market Line. **07**

Index Return (%)	2.00	2.60	3.00	0.60	-4.00	0.00	0.80	8.00	-5.00
Return of X (%)	1.00	8.00	0.40	-1.00	4.00	9.00	7.00	-5.00	3.00

- 1) Find out the beta of the stock AFL Stock.
- 2) If market return is 2, what would be the required return on stock X? Assuming there is no alpha value.

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- (b) Stocks X and Y present the following risk and return data:

$$\begin{aligned}
 R_x &= 15\% & R_y &= 17\% \\
 \sigma_x &= 30\% & \sigma_y &= 25\% \\
 r_{xy} &= 0.50
 \end{aligned}$$

Determine the minimum risk portfolio.

OR

- Q.4 (a) Explain the following:
- (i) Sharpe's Single Index Model
 - (ii) Arbitrage Pricing Theory in Portfolio

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- (b) A highly volatile stock earns the following returns over four-year periods with the investment of Rs.50,000:

$$R_1 = 10\%, R_2 = 30\%, R_3 = 15\%, R_4 = -14\%$$

Calculate and interpret the following values:

1. Arithmetic Mean
2. Geometric Mean
3. Cumulative wealth index
4. Standard deviation

- Q.5 The expected return and risk for the following stocks are provided for the coming year.

$$\begin{aligned}
 R_x &= 15\% & R_y &= 18\% \\
 \sigma_x^2 &= 16\% & \sigma_y^2 &= 25\%
 \end{aligned}$$

$$r_{xy} = 0.60$$

The portfolio risk for a portfolio of 50% in each stock is 4.03.

- (a) Determine the correlation coefficient that will be necessary to reduce the level of portfolio risk by 75%?
- (b) What is the expected return of the equally weighted portfolio?

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OR

- Q.5** A research analyst is analyzing two investment alternatives, stock TPL Plastech and stock Sintex Plastics. The estimated rates of return and their chances of occurrence for the next year are given as under:

Probabilities	Return on TPL Plastech Stock	Return on Sintex Plastics Stock
0.20	22	5
0.60	14	15
0.20	-4	25

- (a) Calculate expected rates of return, variance and standard deviation of both stocks. Is stock "TPL Plastech" is riskier? **07**
- (b) If the financial analyst wishes to invest half in Sintex Plastics and remaining half in TPL Plastech stocks, would it reduce the risk? Explain **07**

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