GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER –III-EXAMINATION – WINTER-2022

Subject Code: 1539503   **Date:25/01/2023**
Subject Name: Security Analysis and Portfoilio Management
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.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1 Explain the following terminologies: **14**
(a) Systematic Risk
(b) Beta
(c) Gambling
(d) Mutual fund
(e) Efficient Market
(f) IPO
(g) Unique Risk

Q.2 **(a)** Describe the attributes that one should consider while evaluating an investment.   **07**
(b) During the past five years, the returns of the stock were as follows: **07**
0.07, 0.03, -0.09, 0.06 and 0.10 respectively.
1. Cumulative wealth index   2. Arithmetic mean
3. Std deviation

OR

(b) Arjun is considering purchase of two securities Sonali Tech Ltd. (ST) and Mufti Auto Ltd. (MA). The estimated returns and probabilities are as under:

Probability	Securities return in %	
	ST	**MA**
0.25	10	8
0.45	12	14
0.30	13	12

Analyse both stock on the parameters of 1) arithmetic mean return and
2) standard deviation and infer which stock is better.   **07**

Q.3 **(a)** Discuss the concept of an Industry Life Cycle by describing each of its four phases with suitable industrial example.   **07**
(b) The following information is provided regarding the performance of mutual fund Elite Equity, Sharp Equity and Nexus Equity for a period of 6 months. The risk free rate of interest is 9%. Rank the funds under Sharpe index method.   **07**

Fund	R_p % (Exp return)	σ_p (Std dev)	β_p (Beta)
Elite	25.38	4	0.23
Sharp	25.11	9.01	0.56
Nexus	25.01	3.55	0.59

OR

Q.3 **(a)** Dow's theory is a useful tool to trace the trend of stocks in the market. Discuss. **07**

(b) Creta Ltd and Texa Ltd have following expected return and risk inputs for the next year. **07**

Expected return (ER_{creta})= 15%, Std dev = 4%
Expected return (ER_{texa})= 18%, Std dev = 5%
Correlation coefficient ($R_{creta,texa}$) = 0.60
  1. Determine the expected return of portfolio with equal proportion in stocks Creta and Texa.
  2. Determine the portfolio risk with equal proportion in stocks Creta and Texa.

Q.4 **(a)** Explain the Risks in Bonds (any five) **07**
(b) A company's bonds have a par value of Rs 100, mature in seven years, and carry a coupon rate of 12% payable semi-annually. If the appropriate discount rate is 16%, determine the price that bond will command in the market place. **07**

OR

Q.4 **(a)** Discuss the impact of changes in interest rates and inflation rate on bonds. **07**
(b) Following information is available for a bond.
Face value: Rs 100
Coupon rate: 9% payable annually
Years to maturity: 5
Current market price: Rs 105
Calculate the duration of the bond. Use approximate formula and calculate yield to maturity as well. **07**

Q.5 **Case Study:**
Abhinav has constructed a portfolio and invested in around Rs 5 lakhs in the same. Following is the information related to Abhinav's portfolio return and market index return for last ten years.

A's portfolio (R)	Market Index(R)
0.7	0.3
0.5	0.6
0.6	0.3
0.5	0.6
0.6	0.4
0.8	0.5
0.5	0.6
0.8	0.3
0.4	0.5

(a) Calculate the beta of the portfolio and analyse the same. **07**
(b) Construct Security market line (assuming risk free rate as 5%) and predict the return of the portfolio if the return of the market in next year is 0.4. **07**

OR

(a) Calculate the constant (alpha) **07**
(b) Construct characteristic line and predict the return of the portfolio if the return of the market in next year is 0.4. **07**

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