

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

Subject Code: 4539221**Date: 30/01/2023****Subject Name: Security Analysis and Portfolio 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 Terms.**(14)**

1. Tax shelter
2. Treasury Bills
3. Portfolio Revision
4. EMH
5. MACD
6. Stop Loss order
7. Candle sticks chart

Q-2(a) What is Mutual Fund? What are the types of Mutual Fund?**(7)****Q-2(b) During the past five years, the returns of a stock were as follows:****(7)**

Year	Return
1	0.07
2	0.03
3	-0.09
4	0.06
5	0.10

Compute the following (a) cumulative wealth index (b) arithmetic mean (c) geometric mean (d) variance (e) standard deviation

OR

Q-2(b) You are thinking of acquiring some shares of ABC Ltd. The rate of return expectation are as follow: (7)

Possible rate of return	Probability
0.05	0.20
0.10	0.40
0.08	0.10
0.11	0.30

Compute the expected return E° on the investment.

Q-3 (a) What is the relationship between the effective interest rate and the stated interest rate? (7)

Q-3 (b) Shyam borrow Rs. 80000 for a musical system at a monthly interest of 1.25 percent. The loan is to be repaid in 12 equal monthly instalment, payable at the end of each month. What is monthly installment? Prepare the loan amortization schedule. (7)

OR

Q-3(a) Write note a single index model. (7)

Q-3(b) A Rs.100 par value bond bears a coupon rate of 14 percent and mature after five years. Interest is payable semi- annually. Compute the value of the bond if the required rate of return is 16 percent. (7)

Q-4 (a) What is meaning of CAPM Model & Explain the assumption of CAPM Model (7)

Q-4(b) The following information is available on a bond:

Face value: Rs.100

Coupon rate: 12% payable annually

Years to maturity: 6

Current market price: Rs. 110

What is the duration of the bond? Use the approximate formula for calculating the yield to maturity. (7)

OR

Q-4 (a) Explain the steps involved in horizon analysis (7)

Q-4(b) The following table gives an analyst's expected return on two stocks for particular market return:

Market Return	Aggressive Stock	Defensive Stock
6%	2%	8%
20	30	16

- What are the betas of the two stock?
- What is the expected return on each stock if the market return is equally likely to be 6% or 20%?
- If the risk free rate is 7% and the market return is equally likely to be 6% or 20% what is SML?
- What are the alphas of the two stocks? (7)

Q-5 The stock of Box Limited Performs well relative to other stocks during recessionary periods. The stock of Cox Limited, on the other hand, does well during growth periods. Both the stock are currently selling for Rs.100 per share. You assess the rupee return (dividend plus price) of these stocks for the next years as follow:

	Economic Condition			
	High Growth	Low Growth	Stagnation	Recession
Probability	0.3	0.4	0.2	0.1
Return on Box's stock	100	110	120	140
Return on Cox's stock	150	130	90	60

Calculate the expected return and standard deviation of investing.

- Rs.1000 in the equity stock of Box Limited
- Rs. 1000 in the equity stock of Cox Limited
- Rs. 500 each in the equity stock of Box Limited and Cox Limited. (14)

OR

Q-5 The return of two assets under four possible states of nature are given below:

State of nature	Probability	Return on assets 1	Return on assets 2
1	0.10	5%	0%
2	0.30	10%	8%
3	0.50	15%	18%
4	0.10	20%	26%

- What is the standard deviation of the return on assets 1? Assets 2?
- What is covariance between the return on assets 1&2?
- What is the co-efficient of correlation between the return on assets 1& 2?

(14)
