

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA– SEMESTER –III-EXAMINATION – WINTER-2023

Subject Code:4539221**Date: 05-12-2023****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 terminologies: **14**
- (a) Support and Resistance in Technical Analysis
 - (b) Floating Rate Bond
 - (c) Asset Allocation
 - (d) Price to Earning ratio
 - (e) Herd behaviour in stock market
 - (f) FPO
 - (g) Unsystematic Risk

- Q.2** (a) Suggest the Best Approach for Security Selection in case of Weak form of Efficiency and Strong form of Efficiency. **07**
- (b) Following information is available **07**

| | Stock A | Stock B |
|----------------------------|---------|---------|
| Expected return | 16% | 12% |
| Standard Deviation | 5% | 8% |
| Coefficient of correlation | 0.60 | |

You are required to help the investor in calculating the Portfolio risk (5 marks) and Portfolio return (2 marks) of stock A and stock B with 50% weight of each.

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) Assume that we have the following data for three funds namely, ABC, DEF and GHI, with their rate of return and beta. The risk free rate is 12%. The risk for market (M) is 1.0 and the rate of return for the market (M) is 18%

| Manager | Rate of Return | Beta |
|---------|----------------|------|
| Market | 18% | 1.00 |
| ABC | 16% | 0.90 |
| DEF | 20% | 1.05 |
| GHI | 22% | 1.20 |

(a) Evaluate the Performance Based on Treynor Ratio (3 marks)

(b) Evaluate the Performance Based on Jensen Ratio (4 marks)

OR

Q.3 (a) Explore Efficient Market Hypothesis and its types. 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

Q.4 (a) Explain the Risks in Bonds (any five) 07

(b) Ravi Rao is the Chief Executive officer of Capmart Ltd, an investment advisory firm. Ravi Rao is interested in evaluating a Bond on the basis of its yield. Help him calculate the Yield to Maturity (approximation method) of a Bond of

₹ 1000 par value with 10 percent annual coupon rate. It will mature after 6

years and currently it's selling at ₹ 1050. If the Fixed Term Deposit rate offered by banks is currently at 10%, advice whether it is advisable to buy this bond? 07

OR

Q.4 (a) Discuss the impact of changes in interest rates and inflation rate on bonds. 07

(b) You are considering the following bond for inclusion in your fixed income portfolio: 07

Coupon rate 10%

Yield to maturity 10%

Term to maturity 10 years

Par value of bond ₹ 1000

Calculate the duration of this bond

Q.5 Case Study:

A portfolio manager is considering a portfolio for his client. T-bills rate is 5%. The details of the portfolio and benchmark index with respect to return are given below for 10 years:

| Year | Return on Portfolio% | Return on Market% |
|------|----------------------|-------------------|
| 1 | 10 | 12 |
| 2 | 15 | 14 |
| 3 | 18 | 13 |
| 4 | 14 | 10 |
| 5 | 16 | 9 |
| 6 | 16 | 13 |
| 7 | 18 | 14 |
| 8 | 4 | 7 |
| 9 | -9 | 1 |
| 10 | 14 | 12 |

(a) Construct CAPM model (Security market line) for the said portfolio. 10

(b) Predict the return of the portfolio if market return in next year is 15%. 04

OR

(a) Calculate the Total Risk of the Portfolio 07

(b) If you invest 50% of your investment in portfolio and 50% in risk free TBill which gives you 5% return. Infer what will happen to portfolio risk & return. (correlation between portfolio & risk free t bill is zero) 07
