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Third Semester MBA Degree Examination, June 2012
Security Analysis and Portfolio Management

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any FOUR full questions from Q.No.1 to 7.
2. Q.No. 8 is compulsory.

- 1** a. What are the objectives of investment? (03 Marks)
 b. Explain the trading and settlement procedure at NSE. (07 Marks)
 c. Differentiate between capital and money market securities. Explain the commonly available money market securities. (10 Marks)

- 2** a. A zero coupon bond with a maturity value of Rs.1,000 is trading at Rs.567. The bond matures in 5 years. What is the yield to maturity of the bond? (03 Marks)
 b. State the five bond theorems. (07 Marks)
 c. Bond A and B have similar characters except the maturity period. Both the bonds carry 9 percent coupon rate with the face value of Rs.10,000. The yield to maturity is 9%. If the yield to maturity is to rise to 11% what will be the respective percentage price change in bond A with 7 years to maturity and B with 10 years to maturity? (10 Marks)

- 3** a. Define risk and distinguish between systematic and unsystematic risk. (03 Marks)
 b. A stock costing Rs.50 pays no dividend. The possible prices of the stock at the end of year and their probabilities are given below.

| End of year price | Probability |
|-------------------|-------------|
| 60 | 0.10 |
| 65 | 0.20 |
| 70 | 0.40 |
| 75 | 0.20 |
| 80 | 0.10 |

- i) Find out the expected return
 ii) Find out the standard deviation of the returns. (07 Marks)
 c. What is the significance of the following results?
 Carry out a comparative analysis.

| Particulars | Stock A | Stock B | Stock C |
|------------------------------|---------|---------|---------|
| Beta | 0.80 | 0.60 | 1.21 |
| Standard deviation of return | 4.50 | 2.30 | 6.50 |
| Correlation with market | 0.60 | 0.30 | 0.80 |

(10 Marks)

- 4** a. What is the top-down approach in fundamental analysis? (03 Marks)
 b. How do you classify shares into growth, cyclical and defensive? Name some stocks in each group and explain. (07 Marks)
 c. The return of xyz company is 12%. This is assumed to continue for the next five years and after that it is assumed to have a growth rate of 8% indefinitely. The dividend paid for the year 2009-10 is 40 percent. The required rate of return is 10 percent and the present price is Rs.120. What is the estimated price according to the two stage model? (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

- 5 a. Briefly describe Dow theory. (03 Marks)
 b. Calculate and plot RSI, (4 days) for the following data.

| | | | | | | | | | | |
|-------|----|----|----|----|----|----|----|----|----|----|
| Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Price | 45 | 47 | 46 | 45 | 48 | 49 | 50 | 51 | 50 | 48 |

- c. What are the various trend reversal signals? Explain with diagrams. (07 Marks)
 (10 Marks)
- 6 a. Define the various forms of market efficiency. (03 Marks)
 b. State the differences between CAPM and APT. (07 Marks)
 c. Estimate the stock return by using the CAPM and the arbitrage model. The particulars are given below.
 i) The expected return of the market is 15 percent and the equity's beta is 1.2 the risk free rate of interest is 8 percent.
 ii)

| Factor | Market price Risk | Sensitivity index |
|-----------------------|-------------------|-------------------|
| Inflation | 6% | 1.1 |
| Industrial production | 2% | 0.8 |
| Risk premium | 3% | 1.0 |
| Interest rate | 4% | -0.9 |

What explanations can you offer to explain the difference in two estimates? (10 Marks)

- 7 a. State the modern approach in the construction of the portfolio. (03 Marks)
 b. Consider two situations: a young man X in early twenties and another young man Y in the late thirties, X and Y earn the same amount of money. Mr. Y has a family, a house, a car and all the encumbrances related to marital status. X is a bachelor. Both of them like to invest in security, what would be their constraints and objectives? (07 Marks)
 c. With the given details, rank the performance of the different funds using Sharpe, Treynor and Jensen performance evaluation techniques. Risk free rate is 8% and market return is 25%.

| Funds | Return % | Std.dev% | Beta |
|-------|----------|----------|------|
| A | 10 | 20 | 0.9 |
| B | 12 | 18 | 0.95 |
| C | 24 | 22 | 1.2 |
| D | 18 | 24 | 1.3 |

(10 Marks)

8 Case Study:

A financial analyst is analysing investment alternatives of z and y. The estimated rates of return and their chances of occurrences for the next year are given in the table below.

| Probability of occurrence | Rates of return | |
|---------------------------|-----------------|-----|
| | Y | Z |
| 0.20 | 22% | 5% |
| 0.60 | 14% | 15% |
| 0.20 | -4% | 25% |

- i) Determine each alternatives expected rate of return, variance and standard deviation.
 ii) Is Y comparatively risk less?
 iii) If the financial analyst wishes to invest equally in both the securities would it reduce risk? Explain. (20 Marks)
