# Third Semester M.B.A. (Distance Mode) Degree Examination, June/ July 2009
## (Directorate of Correspondence Course )
## M.B.A. DP : FM : 306 : Security Analysis and Portfolio Management

Time : 3 Hours Max. Marks : 75

**Section - A**

**Answer the following sub questions in two or three sentences each. Each one carries 2 marks. (2x5=10)**

1. a. Define efficient frontier.
   b. What is factorial analysis in APT model?
   c. Define deep discount bond.
   d. What are oscillators?
   e. What do you mean by immunization strategy?

**Section - B**

**Answer any FIVE of the following. Each one carries SIX marks (5x6=30)**

2. Explain the relevance of fundamental analysis for designing a efficient portfolio.
3. Write short notes on : a) CAPM b) Problems and prospects of Indian capital markets.
4. "Vigilance on the part of overstors could avoid their being caught up in poor public issue". Comment and state what role SEBI play in investor interest protection.
5. Mr. Alex Rons a portfolio with the following characteristics

| Security | Fiscal Policy Sensitivity | Cash market liquidity sensitivity | Proportion | E(R) |
|---|---|---|---|---|
| A | 2.5 | 1.4 | 0.3 | 13% |
| B | 1.6 | 0.9 | 0.3 | 18% |
| C | 0.8 | 1.0 | 0.2 | 10% |
| D | 2.0 | 1.3 | 0.2 | 12% |

Assume that returns are generated by a two factor model. Mr. Alex decides to create an arbitrage portfolio by increasing the holding of security B by 0.5.

a) What must be the weight of the other three securities in Mr. Alex portfolio?

b) What is the E(R) on the arbitrage portfolio ?

6) The following historical rate of return information is provided for Funky Software Co. and the stock market.

| Year | Funky | Market |
|---|---|---|
| 1990 | 12 | 15 |
| 1991 | 9 | 13 |
| 1992 | -11 | 14 |
| 1993 | 8 | -9 |
| 1994 | 11 | 12 |
| 1995 | 4 | 9 |

a) What are the AM & GM rate of returns on the market for the period 90-95?

b) What is Funky beta

c) What is the equation for Funky characteristic line?

7. The following is the market price of reliance petroleum stock on NSE.

| Date | Sep 20 | 21 | 22 | 23 | 24 | 28 | 29 | Oct 1 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|---|
| Price | 43.05 | 43.40 | 41.75 | 42.50 | 43.60 | 43.50 | 43.40 | 46.80 | 46.60 | 43.40 |
| Date | 6 | 7 | 8 | 11 | 12 | 13 | 14 | 15 | | |
| Price | 47.40 | 52.15 | 52.50 | 53.45 | 57.55 | 57.45 | 55.90 | 54.15 | | |

Using run test determine the relative market strength.

## Section - C

**Answer the following questions, Q.No. 8 and 9 carry 10 marks each and Q.no. 10 carries 15 marks.**

**(10+10+15=35 marks)**

8. "Efficient portfolio diversification is always superior to random diversification". Elucidate.

**OR**

Explain as to how term structure theories and portfolio valuation models act as good process for determining relative strength of portfolio.

9. Anil has to evaluate two specific bond issues with the given details. But he is not certain about the future economic conditions. He has to take into account of the possibility of recession. The details are as follows:

| | Bond X Callable | Bond Y Non Callable |
|---|---|---|
| Maturity | 2005 ( 7 yrs) | 2005 ( 7 yrs) |
| Coupon | 12% | 8% |
| YTM | 8% | 7% |
| MD | 6.58 yrs | 6.70 yrs |

a) Which bond would he prefer to invest in the inflation period and in recession period? Give reason for your answer.

b) What would be the price change if YTM falls by 50 basis points.

c) If Anil has to build a bond portfolio with these two bonds what would be proportionate investments?

**OR**

b) Following is the information pertaining to various portfolios

| Portfolio | Mean Returns | $\sigma ei^2$ | $\beta_i$ |
|---|---|---|---|
| A | 21 | 20 | 1.0 |
| B | 27 | 30 | 1.3 |
| C | 13 | 10 | 0.5 |
| D | 24 | 40 | 1.9 |

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| | | | |
|---|---|---|---|
| E | 11 | 20 | 2.0 |
| F | 9 | 50 | 1.0 |
| G | 15 | 30 | 0.5 |

if Rf = 5% $\sigma_m^2$ =12

Determine optimal portfolio when short sales is allowed and when short sales is not allowed.

10. a) Calculate the covariance and coefficient of correlation from the full data

| Stock | Returns | $E_i(R)$ |
|---|---|---|
| X | 14 | 18 |
| Y | 26 | 18 |
| X | 22 | 18 |
| Y | 10 | 18 |

infer the impact of these factors on portfolio selection.

b) With a hypothetical examples evaluate the need for fundamental and technical analysis in selection of portfolio.

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