Seat No. : $\qquad$

## AH-128

## April-2015

$5^{\text {th }}$ Year M.B.A., Integrated

## Investment Management (Finance)

Time: 3 Hours]
[Max. Marks : 70

1. (a) Distinguish between Economic investment and Financial investment. Also discuss various objectives of investment.
(b) Define the terms 'Covariance' and 'Correlation coefficient' and indicate the relationship between them. Also give meaning of 'Beta'

OR
(b) Stock A, B and C display the following parameters :

| Particulars | A | B | $\mathbf{C}$ |
| :--- | :---: | :---: | :---: |
| Expected return | 15 | 20 | 25 |
| Expected variance | 9 | 16 | 4 |

If an investor has to choose two securities from this, which should he select? If he invests equal amount in both the securities so selected, what would be his expected return?
2. (a) Mr. A received ₹ 20 lakhs from his pension fund. He wants to invest in the stock market. The treasury bill rate is $5 \%$ and the market return variance is 10 . The following table gives the details regarding the expected return, beta and residual variance of the individual security. What is the optimum portfolio assuming no short sales?

| Security | Expected Return | Beta | $\boldsymbol{\sigma}_{\mathbf{e i}}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: |
| A | 15 | 1.0 | 30 |
| B | 12 | 1.5 | 20 |
| C | 11 | 2.0 | 40 |
| D | 8 | 0.8 | 10 |
| E | 9 | 1.0 | 20 |
| F | 14 | 1.5 | 10 |

(b) What is Capital Market Line ? Explain the use of it in calculating portfolio returns.

## OR

Explain ‘Arbitrage Pricing Theory'.
3. (a) Spot price of a dividend paying share is ₹ 54 per share, a dividend of ₹ 1 per share and ₹ 2 per share is expected at the end of second month and third month respectively. If risk free rate is $18 \%$ p.a. with continuous compounding then, calculate fair value of one, two and three month futures.

## OR

Explain the following terms in context of options :
(i) Delta
(ii) Theta
(iii) Rho
(b) Spot index value is 4,200 and a call option on the same index with an exercise price of 4,000 with time to expiration 6 months is being traded in the market. If annual volatility of return on index is $20 \%$ and risk free rate of return is $10 \%$ p.a. with continuous compounding, then calculate the price of the call option on index. Using the same data set, also calculate the value of put option.

## OR

Show the process of arbitrage using the following parameters :

| Spot price | $-₹ 100$ |
| :--- | :--- |
| Exercise price of call option | $-₹ 115$ |
| Continuously compounded rate of return | $-10 \%$ p.a. |
| Time to expiry | -1 year |
| Actual premium in the market | $-₹ 10$ per share |
| Possibility of spot price on expiry | $-₹ 160$ or ₹ 80 |

4. (a) Explain the importance of economic analysis and discuss the economic factors considered for this analysis.
(b) The earnings of MB Ltd. grow at an above average rate. This growth rate is expected to continue for 10 years. The dividend growth rate during these years is expected to be at the rate of $12 \%$ p.a. After that, the dividend growth rate is expected to be $8 \%$ p.a. The current dividend per share of the company is ₹ 4.00 ; the capitalization rate of the company is $16 \%$. Determine the intrinsic value of the equity share of the company.

## OR

Given below is some information regarding T Ltd. You are also provided with some key ratios for the particular industry to which T Ltd. belongs. You are required to calculate the relevant ratios for T Ltd. and give your comments on the performance of the company.

Balance Sheet of T Ltd. as on 31-3-2013

| Liabilities | ₹ | Assets | $₹$ |
| :--- | :---: | :--- | :---: |
| Equity share capital | 50 | Net fixed assets | 30 |
| $10 \%$ Debentures | 12 | Stocks | 25 |
| Creditors | 8 | Debtors | 15 |
| Bills payable | 7 | Cash | 10 |
| Other current liabilities | 3 |  |  |
|  | 80 |  | 80 |

The sales for the company for the year ending 31-3-2013 amounted to ₹ 120 lakhs and gross profit was ₹ 34 lakhs.

## Industry Ratios

Current ratio
Gross Profit ratio 35\%
Total Assets turnover 2.5
Debt equity ratio 80\%
5. (a) Explain the interpretation of the following chart patterns with the aid of suitable sketches/figures :

- Channel pattern
- Wedge pattern
- Head and Shoulder pattern
- Triple bottom pattern
(b) Which are the risks associated with investment in bonds ? Explain in detail.


## OR

(a) What are Mathematical Indicators ? Explain the use of any two mathematical indicators in technical analysis with example.
(b) Define 'Duration' of a bond. A 5 year bond with a face value of ₹ 100 has a coupon rate of $8.50 \%$. The market interest rate is $11.75 \%$. The bond is redeemable at par after 5 years. Calculate the duration of the bond.

