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## NG-106

December-2015

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

## Investment Analysis and Portfolio Management

Time : 3 Hours]
[Max. Marks : 100

1. Answer the following questions: (any TWO)
(a) 'Investment management is a complex activity involving several steps and tradeoffs.' - Explain.
(b) What is the meaning of risk in the domain of investment ? How is it classified and sub-classified further? What are the measures of risk ? - Explain in detail.
(c) An investor had analysed a share for a one-year holding period. There is a fiftyfifty chance that the share, currently selling at ₹ 120 , will sell for ₹ 110 or ₹ 140 by the year end. The investor can borrow on $40 \%$ margin from his bank at $10 \%$ interest p.a.
(i) What are the investor's expected holding period yield and risk if he buys 100 shares and does not borrow ?
(ii) What would be his expected yield and risk if he buys 200 shares paying $60 \%$ of the cost with borrowed funds?
2. (a) Define Capital Asset Pricing Model (CAPM). State its assumptions. Also explain the method of pricing securities using CAPM.

## OR

(a) What is Arbitrage Pricing Theory ? What are its similarities and differences relative to CAPM ? Also evaluate the usefulness of APT for asset pricing.
(b) What is the optimum portfolio in choosing among the following securities and assuming the risk-free return is $8 \%$ and variance in the market index is $12 \%$ ?

| Security | Expected <br> Return | Beta | $\boldsymbol{\sigma}_{\mathbf{e i}}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: |
| A | 20 | 1.0 | 40 |
| B | 18 | 2.5 | 35 |
| C | 12 | 1.5 | 30 |
| D | 16 | 1.0 | 35 |
| E | 14 | 0.8 | 25 |
| F | 10 | 1.2 | 15 |
| G | 17 | 1.6 | 30 |
| H | 15 | 2.0 | 35 |

3. (a) Discuss the rationale for expecting the existence of an efficient capital market. Explain different forms of market efficiency and discuss various tests used for them.
(b) State the meaning, rationale, procedure and limitations of the Fundamental Analysis.

## OR

(b) The extract of Balance Sheet and Profit and Loss statement of FI Ltd. are given below :

| Liabilities | ₹ | Assets | $₹$ |
| :--- | :---: | :--- | :---: |
| Equity share capital | 365.00 | Fixed assets | 219.65 |
| (FV ₹ 10) |  | Current assets | 1444.24 |
| Reserves | 640.15 |  |  |
| Loans | 112.86 |  |  |
| Current liabilities | 545.88 |  | 1663.89 |


| (₹ In lakhs) |  |
| :--- | ---: |
| Particulars | $₹$ |
| Sales | 9493.77 |
| Cost of goods sold | 8976.31 |
| Profit before tax | 517.46 |
| Tax | 232.86 |
| Profit after tax | 284.60 |
| Appropriation of profit : |  |
| Dividend | 93.78 |
| Transfer to Reserves | 190.82 |

The equity share of the company is being traded in the market at a price of ₹ 29.00 .

Find the EPS, P/E ratio, Book value of equity share, Dividend payout ratio, Dividend cover and Market to Book ratio and give your comment for each of these.
4. (a) Explain the logic behind Technical Analysis. Also explain the use of the following charts in Technical Analysis :

- Line chart
- Bar chart
- Point and Figures chart
- Japanese Candle Stick chart
(b) An investor is considering the purchase of the following debenture :

Par value : ₹ 100
Coupon rate : 11\%
Maturity : 3 years
(i) If the investor requires a YTM of $13 \%$ on debentures of equivalent risk and maturity, what does he believe is a fair market price ?
(ii) If the debenture is selling for a price of ₹ 97.59 , what is its promised YTM ?
(iii) If the investor expects the debenture to provide a final payment of ₹ 105 in year 3 instead of the promised ₹ 111 , using the debenture's market price of ₹ 97.59 , what is his expected annual return ?
(iv) What is the duration of this debenture?
(v) If an investor ' A ' has a horizon date of 4 years, why is this debenture risky to him?
(vi) If an investor ' B ' has a horizon date of 2 years, why is this debenture risky to him?
5. Answer any TWO from (a), (b) and (c).
(a) The following information has been provided to you:

|  | $\mathbf{E}\left(\mathbf{R}_{\mathbf{P}}\right)$ | $\boldsymbol{\sigma}_{\mathbf{p}}$ | Beta |
| :--- | :---: | :---: | :---: |
| Portfolio ABC | 0.20 | 0.10 | 0.80 |
| Portfolio XYZ | 0.30 | 0.18 | 1.50 |
| Market Index | 0.22 | 0.12 |  |
| Risk free rate | 0.05 |  |  |

Answer the following questions:
(i) Calculate the Treynor measure for each portfolio and the market index
(ii) Calculate the Sharpe measure for each portfolio and the market index
(iii) Calculate Jensen's alpha for each portfolio
(iv) Rank each portfolio based on the above measures. Are they consistent in ranking? What does it imply about the portfolios?
(b) What is a market index ? Outline its utility for security analysis. Discuss two leading stock market indexes in the Indian context.
(c) Discuss the different modes of International Portfolio Investment in detail.

