NEW

2015

MBA 3rd Semester Examination

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

(Specialisation : Financial Management)

PAPER—F-303

Full Marks : 100

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

1. Answer any *four* of the following :   5×4

    (a) "Capital formation takes place in the Primary Market." Explain.   5

(b) What is a stock market index ? How is it calculated ?

$$2\frac{1}{2}+2\frac{1}{2}$$

(c) An inventor has analysed a stock for a one-year holding period. There is a fifty-fifty chance that the stock, currently selling at Rs. 60, will sell for Rs. 55 or Rs. 70 by the year end. The investor can borrow on 40% margin from his bank at 10% per annum.

    (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 buys 200 shares paying 60% of the cost with borrowed

    funds ? $\qquad\qquad 2\frac{1}{2}+2\frac{1}{2}$

(d) Write a short note on the unsystematic risk associated with a security.

(e) Distinguish among arbitrage, hedging and speculation with example.

(f) What is risk ? How do you compute beta ? From the following figures for last three days, compute beta.

(Continued)

Particulars	Day 1	Day 2	Day 3
Nifty Value	3054	3020	3050
TCS Market Price per equity share (Rs.)	1700	1750	1735

2. Answer any *four* of the following : 5×4

(a) You are required to prove that for an equity having a constant growth rate of dividend, the intrinsic value is as follows :

$P_0 = D_1 / (k_e - g)$, where P_0, k_e, D_1 and g have their standard notations.

(b) Mention the assumptions of the Capital Asset Pricing model.

(c) Risk-adjusted performance measures are better than non-risk adjusted measures. Give your views. Explain the importance of NAV to an investor. 3+2

(d) What is a zero coupon bond ? You are required to determine the yield-to-maturity (using short cut method) of a bond having a face value of Rs. 1000 and a coupon

rate of 12.5% which was issued three years back and which is going to mature at par after five years.   2+3

(e) Stocks A and B have the following

Particulars	Stock A	Stock B
Expected Return (%)	20	30
Expected Variance	16	25

Covariance AB is 20

Is there any advantage of holding a combination of A and B. Why or why not ?

(f) "Do not put all your eggs in the same basket"—A very wise proverb in portfolio diversification does not appear with an unmixed blessings. Discuss demerits of portfolio diversification.

3. (a) The Jensen's performance measure helps to understand the predictive ability of managers. In this regard, discuss the performance measurement tool.

(b) Mr. Kapil wants to invest in two securities M and N, the details of which are given below :

Particulars	Security M	Security N
Return (%)	18	14
Variance	4%	1%
% of investment	25	75
Correlation coefficient	(–) 0.40	

You are required to determine the following :

- Mean portfolio return

- Portfolio risk

If there are two other securities P and Q (with a perfect positive correlation) having the same return and variance as above, should you change from MN to PQ (assuming the investment ratio being the same) ? Show with necessary calculations.   4+(2+2+2)

4. (a) What are the advantages of investing in a mutual fund ?

   (b) "An investor can reduce risk by continuing with adding securities". Give your views.   6+4

5. Monthly return data (%) for ONGC stock and NSE index for a 12 month period are presented below :

Month	ONGC	NSE Index
1	− 0.75	− 0.35
2	5.45	− 0.49
3	− 3.05	−1.03
4	3.41	1.64
5	9.13	6.67
6	2.36	1.13
7	− 0.42	0.72
8	5.51	0.84
9	6.80	4.05
10	2.60	1.21
11	− 3.81	0.29
12	− 1.91	−1.96

(a) Calculate alpha & beta for the ONGC stock.

(b) Suppose NSE index is expected to move up by 15% next month. How much return would you expect from ONGC.

3+3+4

(Continued)

6. Explain the weak, semi strong and strong forms of Efficient Market Hypotheses. 10

7. (a) The table gives a comparison of three schemes of Mutual Funds with respect to the market index. Evaluate the performance of the following mutual fund schemes using Sharpe's Index, Treynor's Index and Jhensen Measure.

Funds	Annualised Returns (%)	Beta (β)	Standard Deviation (σ) (%)
Alpha	22	1.12	24.8
Beta	16	0.90	17.5
Charlie	15	0.95	21.6
Market Index	14	1.00	14.5

The risk free rate of return (rf) is 7%.

(b) What is passive style of portfolio management ?

8+2

8. (a) The market price of a Rs. 1,000 par value bond carrying a coupon rate of 14% and maturing after 5 years in

Rs. 1050. What is the yield to maturity (YTM) on this bond ? What will be the realized yield to maturity if the re-investment rate is 12 percent ?

(b) How do you measure portfolio risk ?   7+3

[Internal Assessment : 20]

———