

Portfolio and Mutual Fund

Question 1

Ramesh wants to invest in stock market. He has got the following information about individual securities:

Security	Expected Return	Beta	σ_{2ci}
A	15	1.5	40
B	12	2	20
C	10	2.5	30
D	09	1	10
E	08	1.2	20
F	14	1.5	30

Market index variance is 10 percent and the risk free rate of return is 7%. What should be the optimum portfolio assuming no short sales?

Question 2

Sun Moon Mutual Fund (Approved Mutual Fund) sponsored open-ended equity oriented scheme "Chanakya Opportunity Fund". There were three plans viz. 'A' – Dividend Reinvestment Plan, 'B' – Bonus Plan & 'C' – Growth Plan.

At the time of Initial Public Offer on 1.4.1999, Mr. Anand, Mr. Bacchan & Mrs. Charu, three investors invested ` 1,00,000 each & chosen 'B', 'C' & 'A' Plan respectively. The History of the Fund is as follows:

Date	Dividend %	Bonus Ratio	Net Asset Value per Unit (F.V. ` 10)		
			Plan A	Plan B	Plan C
28.07.03	20		30.70	31.40	33.42
31.03.04	70	5 : 4	58.42	31.05	70.05
31.10.07	40		42.18	25.02	56.15
15.03.08	25		46.45	29.10	64.28
31.03.08		1 : 3	42.18	20.05	60.12
24.03.09	40	1 : 4	48.10	19.95	72.40
31.07.09			53.75	22.98	82.07

On 31st July all three investors redeemed all the balance units.

Calculate annual rate of return to each of the investors.

Consider:

1. Long-term Capital Gain is exempt from Income tax.
2. Short-term Capital Gain is subject to 10% Income tax.
3. Security Transaction Tax 0.2 per cent only on sale/redemption of units.
4. Ignore Education Cess