2)

1) Determine the maximum return on the portfolio. What is the optimal number of shares to buy for each of the stocks? What is the corresponding dollar amount invested in each stock?

	S1	**S2**	**S3**	**H1**	**H2**	**H3**	**C1**	**C2**
Price(a)	40	50	80	60	45	60	30	25
Growth Rate(b)	0.05	0.1	0.03	0.04	0.07	0.15	0.22	0.25
Dividend(c)	2	1.5	3.5	3	2	1	1.8	0
Growth(a*b)	2	5	2.4	2.4	3.15	9	6.6	6.25
Net Profit (c + d)	4	6.5	5.9	5.4	5.15	10	8.4	6.25

Max Return: 4S1 + 6.5S2 + 5.9S3 + 5.4H1 + 5.15 H2 + 10H3 + 8.4C1 + 6.25C2 (To maximize net profit = Dividend + growth)

The optimal number of shares to buy for each of the stocks and the corresponding dollar amount invested in each stock?

S1 = 100000/ 40 = 2500

S2= 300000/ 50 = 6000

S3= 104000/ 80 = 1300

H1= 102000/ 60 = 1700

H2 = 103500/ 45 = 2300

H3= 792000/ 60 = 13200

C1 = 897000/ 30 = 29900

C2 = 100000/ 25 = 4000

Investment in each	100000	300000	104000	102000	103500	792000	897000	100000
No of Shares	2500	6000	1300	1700	2300	13200	29900	4000

Total investment done on shares: - 2498500

Profit 485855

Industry S 504000

Industry H 997500

Industry C 997000

2) Maximum amount invested in 1 sector = 2.5 million * 40% = 1 million

Minimum investment in each stock = .1 million

40% investment in sector 3 (C1, C2) = C1 = 900000, C2 = 100000

40% investment in sector 2 (H1, H2, H3) = H1 =100000, H2 = 100000, H3 = 800000

Balance in sector 1 (S1, S2, S3) = S1 = 100000, S2= 300000, S3 = 100000

Optimal number of shares to buy each of the stock =

S1 = 100000/ 40 = 2500

S2= 300000/ 50 = 6000

S3= 100000/ 80 = 1250

H1= 100000/ 60 = 1666.67

H2 = 100000/ 45 = 2222.22

H3= 800000/ 60 = 13333.33

C1 = 900000/ 30 = 30000

C2 = 100000/ 25 = 4000

D) Change in Optimal Investment = 0.26%

No of Shares	2500	6000	1250	1666.667	2222.222	13333.33	30000	4000
Investment in each	100000	300000	100000	100000	100000	800000	900000	100000