

CHAPTER – 01

PORTFOLIO MANAGEMENT

Lecture No.	Topics	Duration
01 (A)	Introduction, Modern Portfolio Theory (MPT), Example - 01,02	01:03:58 Hrs.
01 (B)	Example – 03, Question - 01 Example -04, 05	00:55:18 Hrs.
02 (A)	Question -02, Example – 06,07,08,09	01:04:39 Hrs.
02 (B)	Concept of Correlation, Example –10 Perfect Positive Correlation, other than Perfect Positive & Negative Correlation, Example – 11,12, Question-03,04,05,06,07	00:53:08 Hrs.
03 (A)	Question - 08, Efficient & Optimum Portfolio ,Example –13, Question – 09,10	01:05:19 Hrs.
03 (B)	Capital Market Theory, Example – 14,15, 16 Question – 11,12	01:05:49 Hrs.
04 (A)	Capital Asset Pricing Method (CAPM), Equation of CAPM, Calculation of Beta, Example –17	01:04:50 Hrs.
04 (B)	Question – 13,15,16, Example – 18,19,20,21	01:11:56 Hrs.
05 (A)	Question – 17 ,18,19,20,21,22	00:40:15 Hrs.
05 (B)	Question – 23, 25,25,26 27	00:47:27 Hrs.
06 (A)	Alpha Calculation , Question –29,30,31,32,33,34	01:06:15 Hrs.
06 (B)	Asset Pricing, Example – 22, Question –35,36,37	00:25:26 Hrs.
07 (A)	Systematic & Unsystematic Risk, Example –24,25,26,28	01:22:25 Hrs.
07 (B)	Question – 38, 39,40,41,42,43	01:12:36 Hrs.
08 (A)	Arbitrage Pricing Theory, (Multifactor model) , Example –29,30,31,	00:59:26 Hrs.

	Question- 44,45,46,47	
08 (B)	Portfolio Rebalancing, Question – 48,49,50	01:14:01 Hrs.
09	Efficient Market Hypothesis, Question – 51,52,53	00:58:27 Hrs.

CHAPTER – 02

MUTUAL FUND

Lecture No.	Topics	Duration
01 (A)	Introduction, Example-01, Question-01,02	00:41:01 Hrs.
01 (B)	Public Offer Price (pop)and Redemption Price, Question-03,04,05,06,07	01:10:30 Hrs.
02 (A)	Return Calculation, Question-08,09,10,11,12,13	01:03:05 Hrs.
02 (B)	Question-14,15,16,17	01:00:25 Hrs.
03 (A)	Question-18,19,20,21	01:01:48 Hrs.
03 (B)	Sharp Ratio, Question-22,23,24,25,26,27,28	01:12:19 Hrs.

CHAPTER – 03

DERIVATIVES

Lecture No.	Topics	Duration
01 (A)	Introduction, Option Contract ,Basics	01:03:45 Hrs.
01 (B)	Short Selling, Example -01,02 Question – 01,02	01:08 29 Hrs.
02 (A)	Question – 03, Intrinsic Value, Time Value, Option Market, Participants in Derivative Market	01:07:31 Hrs.
02 (B)	Option Strategy , Example – 03,04 Question -04,05	00:35:36 Hrs.
03 (A)	Valuation of Option or Option Pricing, Example – 05,06, Question -07, Valuation of Option	00:46:12 Hrs.
03 (B)	Binominal Model, Example - 06 07, Question – 08,09	01:10:04 Hrs.
04 (A)	Two Period Binominal Model, Example -06,07 Question – 08,09	01:00:03 Hrs.
04 (B)	Example – 09, Question – 12,13 Put call Parity Theorem	01:00:10 Hrs.
05 (A)	Normal Distribution Table (Z Table), BSM, Question – 14,15	01:10:28 Hrs.
05 (B)	Forward & Future , Future Contact, Forward Contract V.s Future Contract, Margin Question – 16,17	01:09:32 Hrs.
06 (A)	Future Pricing, Example – 10,11,12,13,14	01:09:57 Hrs.
06 (B)	Question – 18,19,20,21,22,23,24,25	01:02:55 Hrs.
07 (A)	Question – 26, Beta Management or Hedging through Stock Index Future, Example -15	01:04:16 Hrs.
07 (B)	Question – 27,28,29,30	00:52:46 Hrs.
08 (A)	Question – 31,32,33,34,35	00:54:54 Hrs.
08 (B)	Question – 36, 37 38 Example – 16,17, Question – 40,41	01:41:51: Hrs.

09 (A)	Example – 18,19,20,21, Question – 43	00:51:31 Hrs.
09 (B)	Example – 22 ,Question – 44 Example – 23 , Question – 45	00:47:32 Hrs.
10 (A)	Derivative Theory Introduction, Exotic Option	00:42:15 Hrs.
10 (B)	Credit Derivatives , Collateralized Debt Obligation(CDO'S), Weather Derivatives , Electricity Derivatives ,Derivatives Mishaps & Lessons	01:01:37 Hrs.
10 (C)	Option Greek 1 Delta 2 Gamma 3 Theta 4 Vega 5 RHO	00:12:53 Hrs.

CHAPTER – 04

INTEREST RATE RISK MANAGEMENT

Lecture No.	Topics	Duration
01 (A)	Introduction, Forward Rate Agreement , Example – 01, Question-01,02,03	01:07:22 Hrs.
01 (B)	Example – 02,03,04,05, Question-04, Interest Rate Guarantee, Question-05	01:09:19 Hrs.
02 (A)	Interest Rate Future (Euro Dollar Future), Example –06, Question-06	00:48:22 Hrs.
02 (B)	Financial Swap, Equity Swap, Question- 07,08,09,10 Question-11 Hw	01:06:40 Hrs.
03 (A)	Example – 07, Question-12,13,14	01:13:58 Hrs.
03 (B)	Cap, Floor & Collar Question – 15,16,17	00:55:00 Hrs.
03 (C)	Question – 18	00:16:54 Hrs.

AFM FAST-TRACK COMBO - 01 SCHEDULE

SR NO.	CHAPTERS	NO. OF LECTURES	DURATION
01	PORTFOLIO MANAGEMENT	09	17:11:17
02	MUTUAL FUND	03	06:19:38
03	DERIVATIVES	10	20:08:06
04	INTEREST RATE RISK MANAGEMENT	03	06:38:40
	TOTAL	25	50:17:41

CHAPTER – 01

PORTFOLIO MANAGEMENT

EXPECTED RETURN & RISK OF SINGLE STOCK

Question – 01

A stock costing ₹ 120 pays no dividends. The possible prices that the stock might sell for at the end of the year with the respective probabilities are :

Price	Probability
115	0.1
120	0.1
125	0.2
130	0.3
135	0.2
140	0.1

Required:

- Calculate the expected return.
- Calculate the Standard deviation of returns.

(SM TYK – 01)

Solution:**(i) Calculation of Return:**

$$\frac{115 - 120}{120} \times 100 = -4.17\%$$

$$\frac{120 - 120}{120} \times 100 = 0$$

$$\frac{125 - 120}{120} \times 100 = 4.17\%$$

$$\frac{130 - 120}{120} \times 100 = 8.33 \%$$

$$\frac{135 - 120}{120} \times 100 = 12.50 \%$$

$$\frac{140 - 120}{120} \times 100 = 16.67 \%$$

(ii) Calculation of Standard Deviation of Return:

P	X	P (\bar{x})	($x - \bar{x}$)	($x - \bar{x}$) ² P
0.1	- 4.17	- 0.417	- 11.253	12.663
0.1	0	0	- 7.083	5.017
0.2	4.17	0.834	-2.913	1.697
0.3	8.33	2.499	1.247	0.466
0.2	12.50	2.500	5.417	5.869
0.1	16.67	1.667	9.587	9.191
	$\bar{x} =$	7.083%		34.90 (%) ²

$$\sigma_x = \sqrt{34.90} \% = 5.908 \%$$

CORRELATION & RISK OF PORTFOLIO

Question – 02

The historical rates of return of two securities over the past ten years are given. Calculate the Covariance and the Correlation coefficient of the two securities:

Years:	1	2	3	4	5	6	7	8	9	10
Security 1 : (Return per cent)	12	8	7	14	16	15	18	20	16	22
Security 2: (Return per cent)	20	22	24	18	15	20	24	25	22	20

(SM TYK – 06)

Solution:

Year	R_1	Deviation ($R_1 - \bar{R}_1$)	Deviation ($R_1 - \bar{R}_1$) ²	R_2	Deviation ($R_2 - \bar{R}_2$)	Deviation ($R_2 - \bar{R}_2$) ²	Product of deviations
1	12	-2.8	7.84	20	-1	1	2.8
2	8	-6.8	46.24	22	1	1	-6.8
3	7	-7.8	60.84	24	3	9	-23.4
4	14	-0.8	0.64	18	-3	9	2.4
5	16	1.2	1.44	15	-6	36	-7.2
6	15	0.2	0.04	20	-1	1	-0.2
7	18	3.2	10.24	24	3	9	9.6
8	20	5.2	27.04	25	4	16	20.8
9	16	1.2	1.44	22	1	1	1.2
10	22	7.2	51.84	20	-1	1	-7.2
$R_1 = \frac{148}{10} = 14.8$		$\sum = 207.60$		$R_2 = \frac{210}{10} = 21$	$\sum = 84.00$		$\sum = -8$

Standard Deviation of Security 1

$$\sigma_1 = \sqrt{\frac{[R_1 - \bar{R}_1]^2}{N}}$$

$$\sigma_1 = \sqrt{\frac{207.60}{10}} = \sqrt{20.76}$$

$$\sigma_1 = 4.56$$

Standard Deviation of Security 2

$$\sigma_2 = \sqrt{\frac{[R_2 - \bar{R}_2]^2}{N}}$$

$$\sigma_2 = \sqrt{\frac{84}{10}} = \sqrt{8.46}$$

$$\sigma_2 = 2.90$$

$$\text{Covariance} = \frac{\sum_{i=1}^n [R_1 - \bar{R}_1][R_2 - \bar{R}_2]}{N} = -8/10 = -0.8$$