Pinnacle Academy

Chapter Tests

August 2018 Batch

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12th January, 2019

CA Final: New Syllabus

Test of Mutual Funds

Time Allowed-1 hour **Maximum Marks- 30**

Q 1

(a) The current risk free rate is 10% and the expected return on the market portfolio is 15%. The expected returns for four scrips are listed together with their expected betas.

Scrip	Expected Return (%)	Expected beta
Infosys	17	1.3
Bank of Baroda	14.5	0.8
Reliance Industries	15.5	1.1
Satyam Computers	18	1.7

i. Given the above, which of these shares should the fund manager buy and why?

ii. If the risk free rate were to rise to 12% and the expected return on the market portfolio rose to 16.5%, other factors remaining the same, would the fund manager's decision change?

(3 + 3 = 6 marks)

(b) A mutual fund made an issue of 10,00,000 units of Rs.10 each on January 01, 2014. No entry load was charged. It made the following investments on that date:

	Amount (Rs.)
50,000 equity shares of Rs.100 each @ Rs.160	80,00,000
7 % Government Securities	8,00,000
9 % Debentures (Unlisted)	5,00,000
10 % Debentures (Listed)	5,00,000
	98,00,000

During the year, dividends of Rs.12,00,000 were received on equity shares. Interest on all types of debt securities was received as and when due. At the end of the year equity shares and 10% debentures are quoted at 175% and 90% respectively of their par values. Other investments are at par. Operating expensed paid during the year amounted to Rs.4,00,000 out of Rs.4,89,400. No portion of investments were sold during the year. Dividend equivalent to 60% of realised earnings was paid on 31st December 2014.

Determine return for an investor who has purchased 1,000 units of the mutual fund as on 1^{st} January 2014 if units are held as on 31^{st} December 2014. Investor has selected Dividend Option.

(10 Marks)

Q 2

(a) You can earn a return of 15 percent by investing in equity shares on your own. You are considering a recently announced equity mutual fund scheme where the issue expense is 5 % and recurring expenses are 2 %. At what return from mutual fund (in percentage terms) will you be indifferent between investing on your own and investing through the mutual fund?

(4 Marks)

(b) On 1^{st} April 2009 Fair Return mutual fund has following assets and prices at 4.00 p.m.:

Shares	**No. of Shares**	**MPS (Rs.)**
A Ltd.	10,000	19.70
B Ltd.	50,000	482.60
C Ltd.	10,000	264.40
D Ltd.	1,00,000	674.90
E Ltd.	30,000	25.90
No. of units of the fund		8,00,000

Please calculate:

i. NAV of the fund

ii. Assuming, Mr. X a HNI sends a cheque of Rs.50,00,000 to the fund and fund manager purchases 18,000 shares of C Ltd. and balance is held in bank. What shall be the position of the fund?

iii. Now, suppose on 2^{nd} April 2009 at 4.00 p.m. market prices are as under:

Shares	**MPS (Rs.)**
A Ltd.	20.30
B Ltd.	513.70
C Ltd.	290.80
D Ltd.	671.90
E Ltd.	44.20

What is the new NAV?

(4 + 2 + 4 = 10 Marks)

(Assessed answer papers shall be returned latest by 25th January, 2019)

Solution of Test of Mutual Funds

Conducted on 12th January, 2019

Q 1

(a)

(i) **Analysis of shares to be purchased / sold:**

Scrip	Actual Return	Return as per CAPM	Nature of scrip	Investment Decision
Infosys	17 %	10 + 1.3 (5) = 16.5%	Under-priced	BUY
BOB	14.5%	10 + 0.8 (5) = 14.0%	Under-priced	BUY
Reliance	15.5%	10 + 1.1 (5) = 15.5%	Correctly priced	HOLD
Satyam	18%	10 + 1.7 (5) = 18.5%	Over-priced	SELL

(3 Marks)

(ii) **Analysis of shares to be purchased / sold:**

Scrip	Actual Return	Return as per CAPM	Nature of scrip	Investment Decision
Infosys	17 %	12 + 1.3 (4.5) = 17.85%	Over-priced	SELL
BOB	14.5%	12 + 0.8 (4.5) = 15.60%	Over-priced	SELL
Reliance	15.5%	12 + 1.1 (4.5) = 16.95%	Over-priced	SELL
Satyam	18%	12 + 1.7 (4.5) = 19.65%	Over-priced	SELL

(3 Marks)

(b) **Determination of Cash and Bank Balance on 31.12.14:**

	Amount (Rs.)	Amount (Rs.)
Cash received from 10,00,000 units issued @ Rs.10		1,00,00,000
Investments Purchased on 01.01.14		(98,00,000)
Dividend Received		12,00,000
Interest Received:		
7 % Government Securities (8,00,000 X 7%)	56,000	
9 % Debentures (5,00,000 X 9%)	45,000	
10 % Debentures (5,00,000 X 10%)	50,000	1,51,000
Operating Expenses paid in cash		(4,00,000)
Dividend Paid (13,51,000 X 60%)		(8,10,600)
Realised Earnings:		
Dividend Received	12,00,000	
Interest Received	1,51,000	
	13,51,000	
Cash and Bank Balance on 31.12.14		3,40,400

(4 Marks)

Solution prepared by CA. Ashish Lalaji

Determination of NAV on 31.12.14:

	Amount (Rs.)	Amount (Rs.)
Cash and Bank Balance on 31.12.14		3,40,400
Value of Investments		1,05,00,000
Equity Shares (50,000 X 175)	87,50,000	
7 % Government Securities (at par)	8,00,000	
9 % Debentures (Unlisted) (at cost)	5,00,000	
10 % Debentures (Listed) (5,00,000 X 90%)	4,50,000	
Outstanding Management Expenses		(89,400)
(a) Total Net Assets		1,07,51,000
(b) Total number of units outstanding		10,00,000
(c) NAV per unit		10.751

(4 Marks)

Determination of Return to Investor:

Purchase cost of units = 1,000 X 10 = Rs.10,000
Dividend p.u. declared by Mutual Fund = 8,10,600 / 10,00,000 = 0.8106
Dividend received by investor = 0.8106 X 1,000 = Rs.810.6
Value of units at year end = 1,000 X 10.751 = Rs.10,751

$$\text{Return from fund} = \frac{[10{,}751 - 10{,}000] + 810.6}{10{,}000} \times 100 = 15.616\ \%$$

(2 Marks)

Q 2

(a) Return from Mutual Fund to be indifferent

$$= \frac{15}{1 - 0.05} + 2 = 17.79\ \%$$

(4 Marks)

(b)

(i) NAV of the fund:

Shares	**No. of Shares**	**MPS (Rs.)**	**Market Value**
A Ltd.	10,000	19.70	1,97,000
B Ltd.	50,000	482.60	2,41,30,000
C Ltd.	10,000	264.40	26,44,000
D Ltd.	1,00,000	674.90	6,74,90,000
E Ltd.	30,000	25.90	7,77,000
			9,52,38,000
No. of units of the fund			8,00,000
NAV			119.05

(4 Marks)

Solution prepared by CA. Ashish Lalaji

(ii) Revised Position of the Fund:

Rs.50,00,000 are invested in the fund at NAV of Rs.119.05.
The fund issues additional 42,000 units
(50,00,000 / 119.05 i.e. 41,999.16; rounded off)

18,000 shares of C Ltd. are purchased at Rs.264.40, which entails a cash outgo of Rs.47,59,200. Thus, cash balance of Rs.2,40,800 is left idle.

(2 Marks)

(iii) NAV of the fund on 2nd April 2009:

Shares	No. of Shares	MPS (Rs.)	Market Value
A Ltd.	10,000	20.30	2,03,000
B Ltd.	50,000	513.70	2,56,85,000
C Ltd.	28,000	290.80	81,42,400
D Ltd.	1,00,000	671.90	67,19,000
E Ltd.	30,000	44.20	13,26,000
Cash			2,40,800
			10,27,87,200
No. of units of the fund			8,42,000
NAV			122.08

(4 Marks)

Solution prepared by CA. Ashish Lalaji