

Mutual fund [8 to 16]

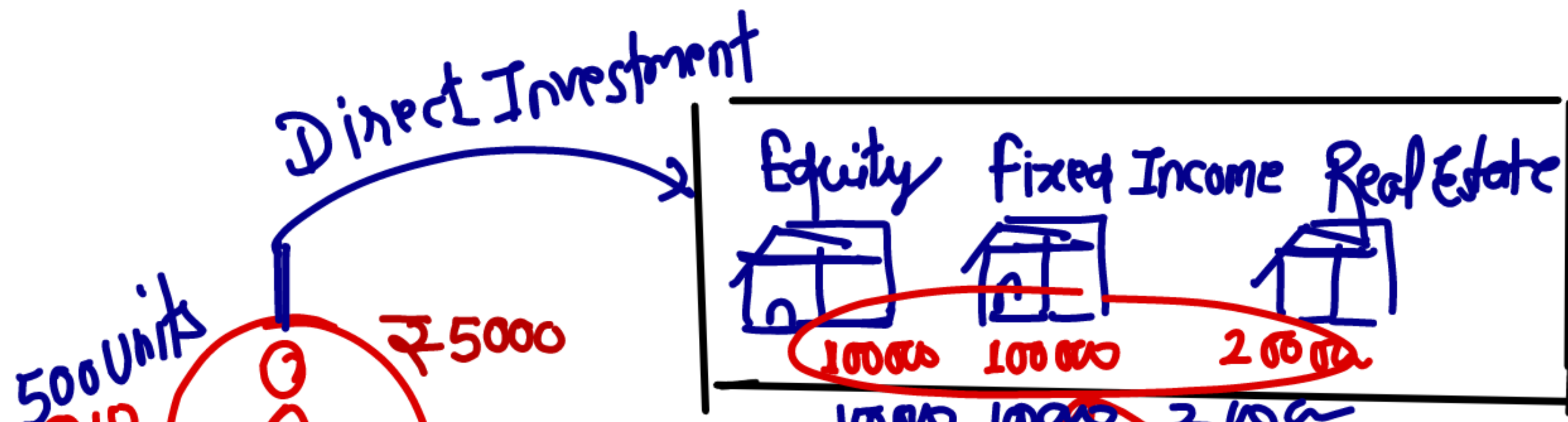
PART I Calculation of NAV

PART II Return Calculation (Imp)

PART III Hedge fund

PART IV performance Evaluation

PART V Residual.



- Diversification
- Expert
- Time

$$\frac{450000}{40000}$$

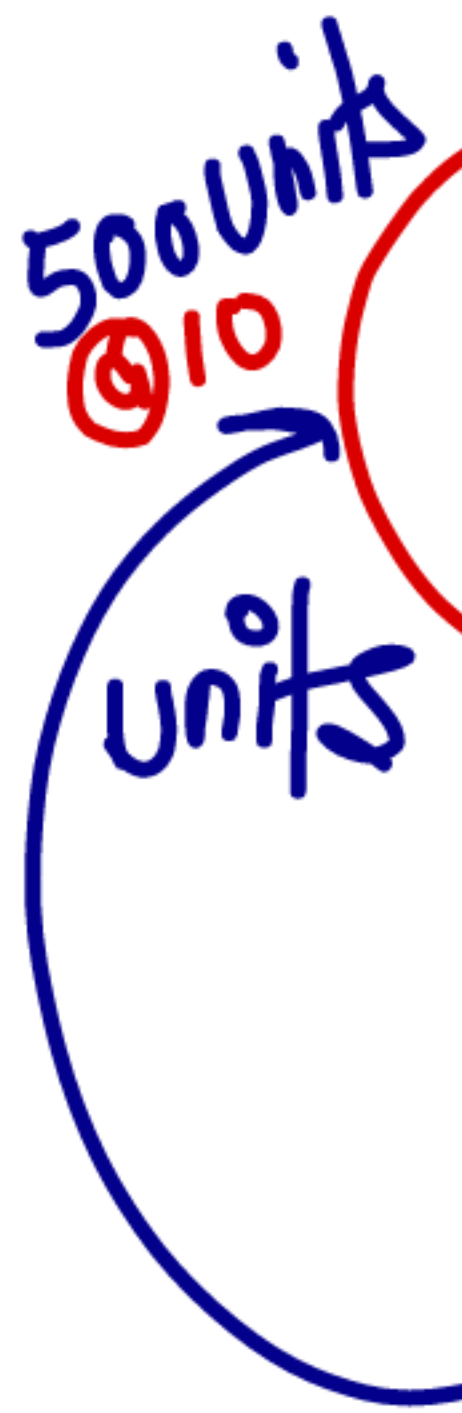
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Indirect Investment

Trade NAV



- open Ended Mutual fund
- closed Ended Mutual fund - Trade x - Demand & supply



5000

PART I Calculation of NAV

Assets	xxx
(-) Outside liabilities	xxx
	<hr/>
Net Assets	xxx
÷ No. of units	xxx
NAV	xxx

Example: 01

On 01/04/2022, 1,00,000 units @ ₹ 10 each
Investment

RIL 4,000 shares of ₹ 100 each = 4,00,000

7% Bonds = 2,00,000

10% Debentures = 3,00,000

Cash = 1,00,000

₹ 10,00,000

On 31/03/2023

Share price of RIL = ₹ 135

7% Bonds = 110%

10% Debenture at PAR

Dividend received = ₹ 60,000

Expenses paid = ₹ 30,000

Interest received from bond & debentures.

Expenses payable = ₹ 2,500

Calculate NAV on 31/03/2023

Calculation of Cash (31/3/2023)

Opening Cash	1,00,000
(+) Dividend Recd	60,000
(+) Intt Recd	14,000
Bonds (2,00,000 × 7%)	
Debenture (3,00,000 × 10%)	30,000
(-) Exp paid	30,000
closing Cash	<u>1,74,000</u>

Calculation of NAV

Cash (w.N.I)	174000
RIL (4000 x 135)	540000
Bonds (200000 x 110%)	220000
Debtures	300000
(-) Expenses payable	2500
Net Assets	<hr/> 1231500
÷ No. of units	100000
NAV	₹ 12.315

Question: 01

Cinderella Mutual Fund has the following assets in Scheme Rudolf at the close of business on 31st March, 2014.

Company	No. of Shares	Market Price per Share
Nairobi Ltd.	25,000	₹ 20
Dakar Ltd.	35,000	₹ 300
Senegal Ltd.	29,000	₹ 380
Cairo Ltd.	40,000	₹ 500

The total number of units of Scheme Rudolf are 10 lacs. The Scheme Rudolf has accrued expenses of ₹ 2,50,000 and other liabilities of ₹ 2,00,000. Calculate the NAV per unit of the Scheme Rudolf.

(Study Material, PM & MTP April – 2021)

(Page No. 02)

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Question: 02

A Mutual Fund Co. has the following assets under it on the close of business as on:

Company	No. of Shares	1 st February 2012 Market price per share ₹	2 nd February 2012 Market price per share ₹
L Ltd.	20,000	20.00	20.50
M Ltd.	30,000	312.40	360.00
N Ltd.	20,000	361.20	383.10
P Ltd.	60,000	505.10	503.90

Total No. of Units 6,00,000

(i) Calculate Net Assets Value (NAV) of the Fund.

(ii) Following information is given:

Assuming one Mr. A, submits a cheque of ₹ 30,00,000 to the Mutual Fund and the Fund manager of this company purchases 8,000 shares of M Ltd; and the balance amount is held in Bank. In such a case, what would be the position of the Fund?

(iii) Find new NAV of the Fund as on 2nd February 2012.

(Study Material & PM)

(Page No. 02)

① Calculation of NAV (1/2/2012)

Company	No.	MPS	Value
L Ltd	20000	20	400000
M Ltd	30000	312.40	9372000
N Ltd	20000	361.20	7224000
P Ltd	60000	505.10	30306000
Net Asset			47302000
- % No. of units			600000
NAV			<u>78.837</u>

①① Calculation of NAV(1/2)

$$\text{No. of New Units} = \frac{\text{₹ } 30,00,000}{78.837} = 38,053.198 \text{ units}$$

		MPS	Value
L	20,000	20	
M	38,000	312.40	
N	20,000	361.20	
P	60,000	505.16	
Bank	30,00,000 - (8,000 × 312.40)	-	5,00,800
			<u>5,03,02,000</u>

Net Assets

$$\div \text{No. of Units } (60,000 + 38,053.198) \quad \frac{5,03,02,000}{638,053.198}$$

NAV

$$78.837$$

Question: 03

On 1st April 2009 Fair Return Mutual Fund has the following assets and prices at 4.00 p.m.

Shares	No. of Shares	Market Price Per Share (₹)
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 funds		8,00,000

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Please calculate:

- (a) NAV of the Fund on 1st April 2009.
- (b) Assuming that on 1st April 2009, Mr. X a HNI, send a cheque of ₹ 50,00,000 to the Fund and Fund Manager immediately purchases 18000 shares of C Ltd. and balance is held in bank. Then what will be position of fund.
- (c) Now suppose on 2 April 2009 at 4.00 p.m. the market price of shares is as follows:

Shares	₹
A Ltd.	20.30
B Ltd.	513.70
C Ltd.	290.80
D Ltd.	671.90
E Ltd.	44.20

Then what will be new NAV.

(Study Material, PM & RTP November – 2019)

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Question: 08

SG Mutual Fund Company has the following assets under it on the close of business as on:

		1st August 2017	2nd August 2017
Company	No. of Shares	Market price per share (₹)	Market price per share (₹)
Q Ltd.	2,000	200.00	205.00
R Ltd.	30,000	312.40	360.00
S Ltd.	40,000	180.60	191.55
T Ltd.	60,000	505.10	503.90

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Total No. of Units issued by the Mutual Fund is 6,00,000.

(i) Calculate Net Assets Value (NAV) of the Fund.

(ii) Following information is also given:

Assuming that Mr. Zubin, an investor, submits a cheque of ₹ 30,00,000 to the Mutual Fund and the Fund Manager of this entity purchases 8,000 shares of R Ltd; and the balance amount is held in Bank. In such a case, what would be the position of the Fund?

(iii) Calculate new NAV of the Fund as on 2nd August 2017.

(Exam May – 2018)

(Page No. 10)

Public Offer Price (POP) & Redemption Price

front-End

Entry Load = 1%



NAV = ₹ 10.75

Exit Load = 1%
Back-End Load

(Buyer)



Unit Holders

$$\begin{aligned} \text{POP} &= 10.75 + 1\% \\ &= ₹ 10.86 \end{aligned}$$

(Seller)

Redemption Price

$$\begin{aligned} &= 10.75 - 1\% = ₹ 10.64 \end{aligned}$$

Eg

NAV = ₹ 10.80 ✓

~~POP = ₹ 11.25~~

4%

Calculate Entry load in %

Load (%)

$$\frac{11.25 - 10.80}{10.80} \times 100 = 4.17\%$$

Question: 04

The unit price of Equity Linked Savings Scheme (ELSS) of a mutual fund is ₹ 10/-. The public offer price (POP) of the unit is ₹ 10.204 and the redemption price is ₹ 9.80.

Calculate:

- (i) Front-end Load (2.04%)
- (ii) Back end Load (2%)

(Study Material, PM & Exam May – 2018)

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Question: 05

A mutual fund made an issue of 10,00,000 units of ₹ 10 each on January 01, 2008. No entry load was charged. It made the following investments:

Particulars	₹
50,000 Equity shares of ₹ 100 each @ ₹ 160	80,00,000
7% Government Securities	8,00,000
9% Debentures (Unlisted)	5,00,000
10% Debentures (Listed)	<u>5,00,000</u>
	<u>98,00,000</u>

During the year, dividends of ₹ 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 face value. Other investments are at par.

Find out the Net Asset Value (NAV) per unit given that operating expenses paid during the year amounted to ₹ 5,00,000. Also find out the NAV, if the Mutual fund had distributed a dividend of ₹ 0.80 per unit during the year to the unit holders.

(Study Material & PM)

(Page No.06)

W.N. 1 Calculation of Cash

Opening Cash	2,00,000
(100,00,000 - 98,00,000)	
Dividend Recd	12,00,000
Int Recd	
(56,000 + 45,000 + 50,000)	151,000
(-) Exp paid	5,00,000
Cash	<u><u>1,051,000</u></u>

Calculation of NAV

Cash (w/o No. 1)	1051000
(+) Equity (50000 × 100) 175%	875000
(+) Govt. Securities	800000
(+) 9% Debentures	500000
(+) 10% Debentures (500000 × 90%)	450000
	<hr/>
Net Assets	11551000
÷ No. of units	1000000
NAV	₹ 11.551

If MF distributes dividend

Net Assets	11551000
(-) Dividend paid (0.8 × 1000000)	₹ 800000
	<hr/>
Net Assets	
÷ No. of units	1000000
NAV	₹ 10.751

(11.551 - 0.80)

↗

Question: 06

A mutual fund made an issue of New Fund Offer (NFO) on 01/01/2021 of 10.00 Lakh Units of ₹ 10 each. No entry load was charged. It made the following investments:

Particulars	(₹)
25,000 Equity Shares of XYZ Ltd., ₹ 100 each @ ₹ 320	80,00,000
5% Government Securities	4,00,000
10% NCDs Unlisted	5,00,000
8% Listed Debentures	10,00,000

During the year, dividends of ₹ 8.00 lakhs were received on equity shares. Interest on all types of debt securities were received. On 31st December 2021 equity shares were appreciated by 15% while listed debentures were quoted at 20% premium. XYZ Ltd., on 15th December 2021 in its AGM declared the interim dividend of 10% and bonus shares at 1:10 with the record date of 28th December 2021.

W.N.1 Calculation of Cash

Opening Cash (1000000 - 990000)	100000
Dividend	800000
Intt (20000 + 50000 + 80000)	150000
Interim dividend (25000 x 100) x 10%	250000
(-) Expenses paid	300000
Cash	<u><u>1000000</u></u>

Calculation of NAV

$$\text{Equity} \left[25000 + \left(25000 \times \frac{1}{10} \right) \right] \times (320 \times 1.15) \quad 101200000$$

$$\text{Cash (w.N.I.)} \quad 1000000$$

$$\text{Govt Securities} \quad 400000$$

$$\text{NCD} \quad 500000$$

$$\text{listed debentures} \quad 1200000$$

$$13220000$$

$$1000000$$

$$13.22$$

$$\frac{\text{Net Assets}}{\% \text{ No. of units}} \\ \text{NAV}$$

- (i) Find out the NAV per unit as on 31st December given that the operating expenses paid during the year amounting to ₹ 3,00,000. ✓
- (ii) Find out the NAV, if the MF had distributed a dividend of, ₹ 0.50 per unit during the year to the investors. ✓
- (iii) If you are the investor, find out what is the annualized return you have got.

(Exam May - 2022)
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$$\begin{array}{r}
 \text{② Net Assets} = 13220000 \\
 (-) \text{ Dividend} \\
 \quad (1000000 \times 0.5) \quad 500000 \\
 \hline
 \text{Net Asset} \quad 12720000 \\
 \div \text{No.} \quad 1000000 \\
 \hline
 \text{NAV} \quad 12.72
 \end{array}$$

③ Calculation of Return

$$\text{Return} = \frac{13.22 - 10}{10} \times 100 = 32.22\%$$

$$\text{Alternative Return} = \frac{(12.72 - 10) + 0.50}{10} \times 100 = 32.22\%$$

Question: 07

Based on the following information, determine the NAV of a regular income scheme on per unit basis:

Particulars	₹ Crores
Listed shares at Cost (ex-dividend)	20
Cash in hand	1.23
Bonds and debentures at cost	4.3
Of these, bonds not listed and quoted	1
Other fixed interest securities at cost	4.5
Dividend accrued	0.8
Amount payable on shares	6.32
Expenditure accrued	0.75
Number of units (₹ 10 face value)	20 lacs
Current realizable value of fixed income securities of face value of ₹ 100	106.5
The listed shares were purchased when Index was	1,000
Present index is	2300
Value of listed bonds and debentures at NAV date	8

Calculation of NAV (Crores)

Cash	1.23
listed shares ($\frac{20}{1000} \times 2300$)	46.00
listed bonds	8.00
Unlisted bonds (1 x 80%)	0.80
fixed Interest securities	4.50
Dividend Accrued	0.80
Amount payable on shares	(6.32)
Expenditure accrued	(0.75)
Net Assets	54.26
\div No. of units	0.20 cr.
NAV	₹ 271.30

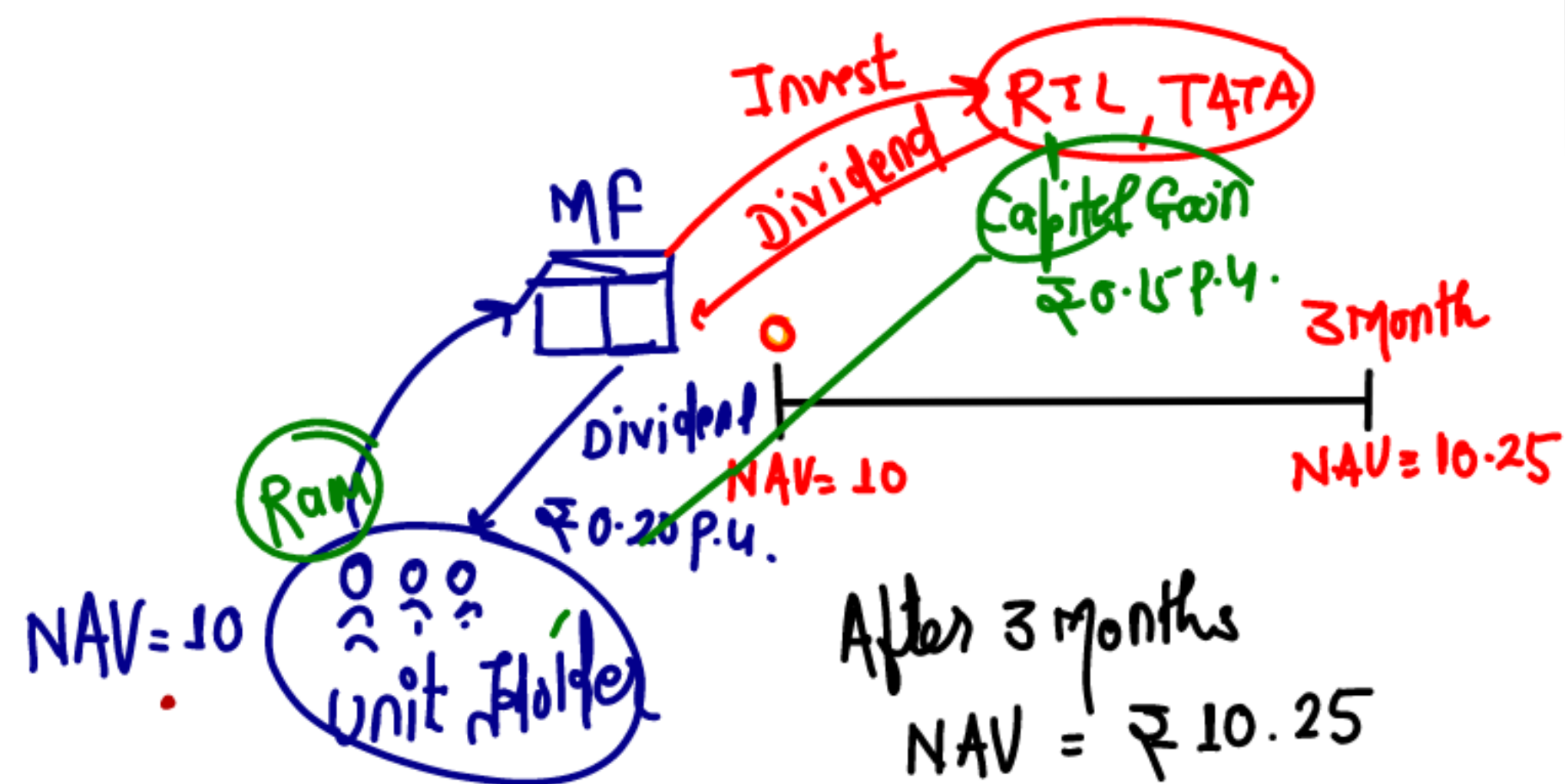
There has been a diminution of 20% in unlisted bonds and debentures. Other fixed interest securities are at cost.

(SM, PM & MTP April – 2022)

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$$\left[\frac{4.5}{100} \times 106.50 \right]$$

PART II Return Calculation



$$\text{Holding period Return (HPR)} = \frac{\text{Change in NAV} + \text{Dividend Income} + \text{Capital Gain}}{\text{Beginning NAV}} \times 100$$

$$\text{Effective Annual Return} = \text{HPR} \times \frac{360}{\text{period}}$$

Question: 11

A mutual fund that had a net asset value of ₹ 20 at the beginning of month - made income and capital gain distribution of ₹ 0.0375 and ₹ 0.03 per share respectively during the month, and then ended the month with a net asset value of ₹ 20.06. Calculate monthly return.

(Study Material & PM)

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0.6375% P.M.
7.65% P.Q.

Question: 12

An investor purchased 300 units of a Mutual Fund at ₹ 12.25 per unit on 31st December, 2009. As on 31st December, 2010 he has received ₹ 1.25 as dividend and ₹ 1.00 as capital gains distribution per unit.

Required :

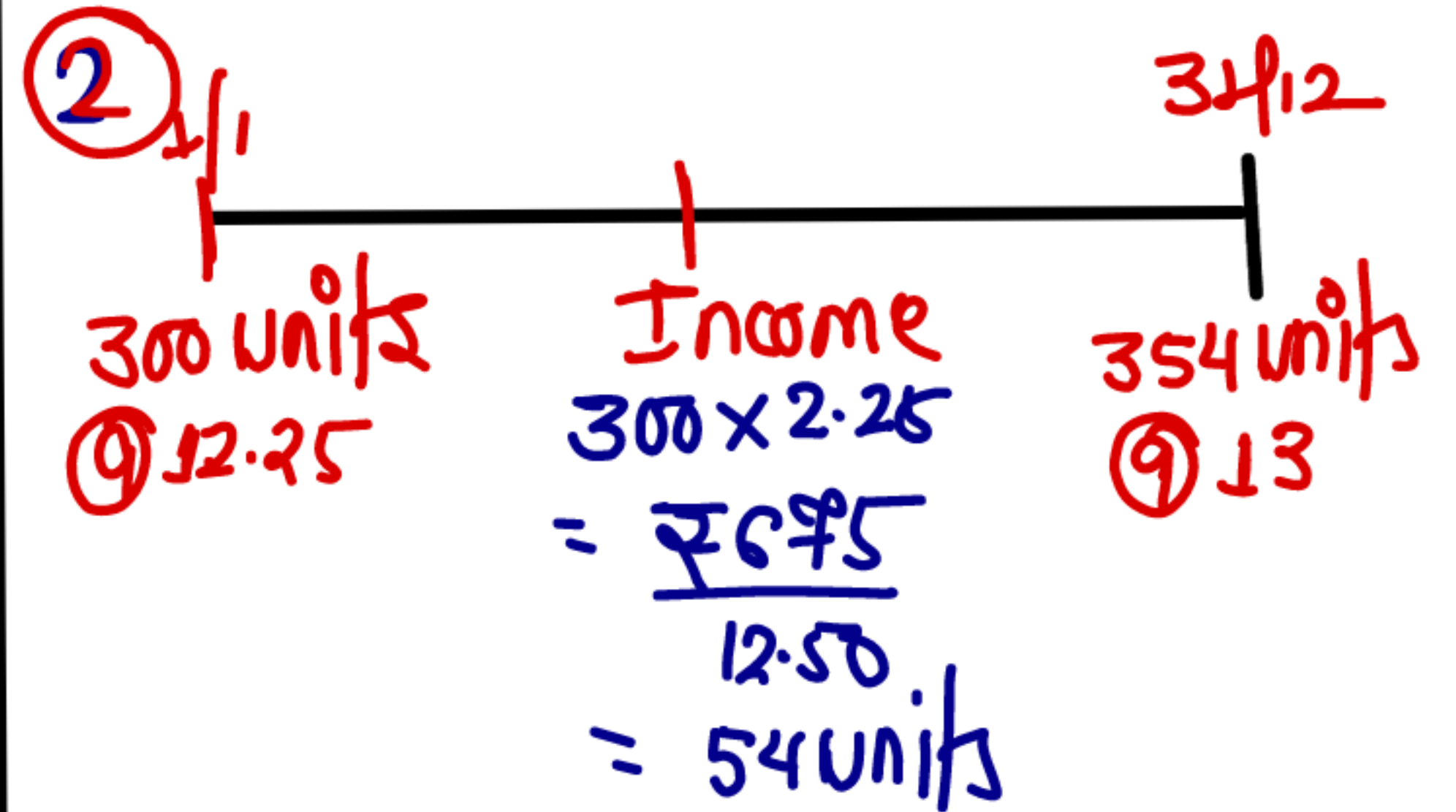
- (i) The return on the investment if the NAV as on 31st December, 2010 is ₹ 13.00.
- (ii) The return on the investment as on 31st December, 2010 if all dividends and capital gains distributions are reinvested into additional units of the fund at ₹ 12.50 per unit.

(Study Material & PM)

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① Return on Investment

$$ROI = \frac{(13 - 12.25) + 1.25 + 1.00}{12.25} \times 100$$
$$= 24.49\% \text{ p.a.}$$



② Dividend Reinvestment plan

$$\text{Investment} = 300 \text{ units} \times 12.25 = ₹ 3675$$

$$\text{Income} = 300 \text{ units} \times 2.25 = 675$$

$$\text{Additional units} = \frac{675}{12.50} = 54 \text{ units}$$

$$\begin{aligned} \text{Investment Value (31 Dec)} &= 354 \text{ units} \times 13 \\ &= ₹ 4602 \end{aligned}$$

$$\text{ROI} = \frac{4602 - 3675}{3675} \times 100 = 25.22\%$$

Question: 13

SBI mutual fund has a NAV of ₹ 8.50 at the beginning of the year. At the end of the year NAV increases to ₹ 9.10. Meanwhile fund distributes ₹ 0.90 as dividend and ₹ 0.75 as capital gains.

- (i) What is the fund's return during the year?
- (ii) Had these distributions been re-invested at an average NAV of ₹ 8.75 assuming 200 units were purchased originally. What is the return?

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(Study Material & PM)

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Question: 16

A Mutual Fund having 300 units has shown its NAV of ₹ 8.75 and ₹ 9.45 at the beginning and at the end of the year respectively. The Mutual Fund has given two options:

- (i) Pay ₹ 0.75 per unit as dividend and ₹ 0.60 per unit as a capital gain, or
- (ii) These distributions are to be reinvested at an average NAV of ₹ 8.65 per unit.

What difference it would make in terms of return available and which option is preferable?

(SM, PM & Exam November – 2018)

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Question: 21

Orange purchased 200 units of Oxygen Mutual Fund at ₹ 45 per unit on 31st December, 2009. In 2010, he received ₹ 1.00 as dividend per unit and a capital gains distribution of ₹ 2 per unit.

Required:

- (i) Calculate the return for the period of one year assuming that the NAV as on 31st December 2010 was ₹ 48 per unit.
- (ii) Calculate the return for the period of one year assuming that the NAV as on 31st December 2010 was ₹ 48 per unit and all dividends and capital gains distributions have been reinvested at an average price of ₹ 46.00 per unit.

Ignore taxation.

(Practice Manual & RTP May – 2020)

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Question: 10

The following particulars relating to Vishnu Fund Schemes:

Particulars	Value ₹ in Crores
1. Investment in Shares (at cost)	
a. Pharmaceuticals companies	79
b. Construction Industries	31
c. Service Sector Companies	56
d. IT Companies	34
E. Real Estate Companies	10
2. Investment in Bonds (Fixed Income)	
a. Listed Bonds (8000, 14% Bonds of ₹ 15,000 each)	12
b. Unlisted Bonds	7
3. No. of Units outstanding (crores)	4.2
4. Expenses Payable	3.5
5. Cash and Cash equivalents	1.5
6. Market expectations on listed bonds	8.842%

Particulars relating to each sector are as follows:

Sector	Index on Purchase Date	Index on Valuation Date
Pharmaceutical companies	260	465
Construction Industries	210	450
Service Sector Companies	275	480
IT Companies	240	495
Real Estate Companies	255	410

The fund has incurred the following expenses:

Consultancy and Management fees	₹ 480 Lakhs
Office Expenses	₹ 150 Lakhs
Advertisement Expenses	₹ 38 Lakhs

You are required to calculate the following:

- Net Asset Value of the fund
- Net Asset Value per unit
- If the period of consideration is 2 years, and the fund has distributed ₹ 3 per unit per year as cash dividend, ascertain the Net return (Annualized).
- Ascertain the Expenses ratio.

(Exam May-2019)

(Page No.13)

① Calculation of Net Asset Value

Equity (Cr.)

- Pharma $\left(\frac{79}{260} \times 465\right) = 141.288$
- Construction $\left(\frac{31}{210} \times 450\right) = 66.428$
- Service Sector $\left(\frac{56}{275} \times 480\right) = 97.745$
- IT $\left(\frac{34}{240} \times 495\right) = 70.125$
- Real Estate $\left(\frac{10}{255} \times 410\right) = 16.078$

Bonds

Listed Bonds = $\frac{12 \times 14\%}{8.842\%} = 19.000$

Unlisted Bonds = 7.000

Cash = 1.50

(-) Expenses payable = (3.50)

Net Assets = 415.665 Cr.

② Calculation of NAV

Net Assets = 415.665

No. = 4.2

NAV = ₹ 98.97

③ Calculation of Annual Return

Beginning NAV

$$\begin{array}{r} \text{Equity (79 + 31 + 56 + 34 + 10)} = 210 \\ \text{Bonds (12 + 7)} = 19 \\ \hline \text{Net Assets} = 229 \\ \div \text{No. of units} = 4.2 \\ \hline \text{NAV} = 54.52 \end{array}$$

$$\text{HPR} = \frac{(98.97 - 54.52) + (3 \times 2)}{54.52} \times 100 = 92.53\%$$

$$\text{Annual Return} = 92.53 \times \frac{1}{2} = 46.265\%$$

(iv) Expenses Ratio

$$\text{Expenses Ratio} = \frac{\text{Expenses per unit}}{\text{Avg NAV per unit}} \times 100$$

$$\text{Expenses p.u.} = \frac{480 + 150 + 38}{420} = 1.590$$

$$\text{Avg NAV p.u.} = \frac{98.97 + 54.52}{2} = 76.745$$

$$\text{Exp. Ratio} = \frac{1.590}{76.745} \times 100 = 2.072\%$$

$$\text{Exp. Ratio (p.a)} = \frac{2.072}{2} = 1.035\% \text{ p.a.}$$

Question: 09

The following particulars relating to S fund schemes:

Particulars	Value ₹ in Crores
1. Investment in shares (at cost)	
a. Pharmaceuticals companies	158
b. Construction Industries	62
c. Service Sector Companies	112
d. IT Companies	68
e. Real Estate Companies	20
2. Investment in Bonds (Fixed Income)	
a. Listed Bonds (8000, 14% Bonds of ₹ 15,000 each)	24
b. Unlisted Bonds	14
3. No. of Units outstanding (crores)	8.4
4. Expenses Payable	7
5. Cash and Cash equivalents	3
6. Market expectations on listed bonds	8.842%

The fund has incurred the following expenses:

Consultancy and Management fees	₹ 520 Lakhs
Office Expenses	₹ 180 Lakhs
Advertisement Expenses	₹ 48 Lakhs

Particulars relating to each sector are as follows:

Sector	Index on Purchase date	Index on Valuation date
Pharmaceutical Companies	300	500
Construction Industries	275	490
Service Sector Companies	285	500
IT Companies	270	515
Real Estate Companies	265	440

Required:

- (i) Calculate the Net Asset Value of the fund
- (ii) Calculate the Net Asset Value per unit
- (iii) Determine the Net return (Annualized), if the period of consideration is 4 years, and the fund has distributed ₹ 2 per unit per year as cash dividend during the same period.

Note: Calculate figure in ₹ Crore upto 3 decimal points.

(RTP May – 2021 & Exam May – 2019)

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iv) Exp. Ratio

Question: 14

The following information is extracted from Steady Mutual Fund's Scheme:

- Asset Value at the beginning of the month - ₹ 65.78
- Annualized return - 15 %
- Distributions made in the nature of Income & Capital gain (per unit respectively) - ₹ 0.50 and ₹ 0.32

You are required to:

- Calculate the month end net asset value of the mutual fund scheme (limit your answers to two decimals).
- Provide a brief comment on the month end NAV.

(Study Material & PM)
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① Calculation of Month end NAV

$$HPR = 15 \times \frac{1}{12} = 1.25\%$$

$$HPR = \frac{\Delta \text{ in NAV} + \text{Income}}{\text{Opening NAV}}$$
$$0.0125 = \frac{(x - 65.78) + 0.82}{65.78}$$

$$0.82 = (x - 65.78) + 0.82$$

$$x = 65.78$$

② No change in NAV.

Question: 15

Mr. A has invested in three Mutual Fund Schemes as per details below:

Particulars	MF A	MF B	MF C
Date of investment	01/12/2009	01/01/2010	01/03/2010
Amount of investment	₹ 50,000	₹ 1,00,000	₹ 50,000
Net Assets Value (NAV) at entry date	₹ 10.50	₹ 10	₹ 10
Dividend received upto 31/03/2010	₹ 950	₹ 1,500	Nil
NAV as at 31/03/2010	₹ 10.40	₹ 10.10	₹ 9.80

Required:

What is the effective yield on per annum basis in respect of each of the three schemes to Mr. A upto 31/03/2010?

(Study Material & PM)

(Page No.19)

Calculation of Annual Return

	MFA	MF B	MF C
Investment	50000	100000	50000
NAV	10.50	10	10
No. of units	4761.905	10000	5000
Dividend	950	1500	0
Closing NAV	10.40	10.10	9.80
Investment Value (31/3)	₹ 49524	101000	49000
Days of Investments	121	90	31 days

Annual Return

$$\text{MFA} = \frac{(49524 - 50000) + 950}{50000} \times \frac{365}{121} \times 100$$

$$= \underline{2.86\% \text{ p.a.}}$$

$$\text{MF B} = \frac{(101000 - 100000) + 1500}{100000} \times 100 \times \frac{365}{90}$$

$$= 10.14\%$$

$$\text{MF C} = \frac{49000 - 50000}{50000} \times 100 \times \frac{365}{31}$$

$$= -23.55\%$$

Question: 17

Mr. Sinha has invested in three Mutual fund schemes as per details below:

Particulars	Scheme X	Scheme Y	Scheme Z
Date of investment	01/12/2008	01/01/2009	01/03/2009
Amount of investment	₹ 5,00,000	₹ 1,00,000	₹ 50,000
Net Assets Value (NAV) at entry date	₹ 10.50	₹ 10.00	₹ 10.00
Dividend received upto 31/03/2009	₹ 9,500	₹ 1,500	Nil
NAV as at 31/03/2009	₹ 10.40	₹ 10.10	₹ 9.80

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You are required to calculate the effective yield on per annum basis in respect of each of the three schemes to Mr. Sinha upto 31/03/2009.

(Study Material & PM)

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Question: 18

Mr. Y has invested in the three mutual funds (MF) as per the following details:

Particulars	Scheme X	Scheme Y	Scheme Z
Amount of Investment (₹)	2,00,000	4,00,000	2,00,000
NAV at the time of purchase (₹)	10.30	10.10	10
Dividend Received up to 31.03.2018 (₹)	6,000	0	50,000
NAV as on 31.03.2018 (₹)	10.25	10	10.20
Effective yield per annum as on 31.03.2018 (percent)	9.66	-11.66	24.15

Assume 1 Year = 365 days

Mr. Y has misplaced the documents of his investment. Help him in finding the date of his original investment after ascertaining the following:

- (i) Number of units in each scheme;
- (ii) Total NAV;
- (iii) Total Yield; and
- (iv) Number of days investment held.

(SM, PM, MTP October – 2020 & Exam May – 2018)

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① No. of units

$$MF_X = \frac{200000}{10.30} = 19417.476 \text{ units}$$

$$MF_Y = \frac{400000}{10.10} = 39603.960 \text{ units}$$

$$MF_Z = \frac{200000}{10} = 20000 \text{ units}$$

② Total NAV

$$MF_X = 19417.476 \times 10.25 = 199029$$

$$MF_Y = 39603.960 \times 10 = 396040$$

$$MF_Z = 20000 \times 10.20 = 204000$$

Total NAV

799069

(iii) Total Return

$$\text{Total Return} = \frac{(799069 - 800000) + 11000}{800000} \times 100 = 1.26\%$$

(iv) No. of days

MF X

$$\text{HPR} = \frac{(199029 - 200000) + 6000}{200000} \times 100$$
$$= 2.5145\%$$

$$\text{Annual Return} = 2.5145 \times \frac{365}{x}$$

$$9.66 = 2.5145 \times \frac{365}{x}$$

$$x = \frac{2.5145 \times 365}{9.66} = 95 \text{ days}$$

MF Y =

MF Z =

Date of Investment

MF X

31/3/2018 - 95 days

Date of Investment
= 26/12/2017

MF Y

MF Z