

MUTUAL FUNDS

IMPORTANT QUESTIONS

CLASS WORK QUESTIONS

Question 3:

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:

- Calculate the Net Asset Value of the fund
- Calculate the Net Asset Value per unit
- 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.

iv. Expense ratio

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

(Source: ICAI)

Question 9:

On 1-4-2012 ABC Mutual Fund issued 20 lakh units at ₹ 10 per unit. Relevant initial expenses involved were ₹ 12 lakhs. It invested the fund so raised in capital market instruments to build a portfolio of ₹ 185 lakhs. During the month of April 2012 it disposed off some of the instruments costing ₹ 60 lakhs for ₹ 63 lakhs and used the proceeds in purchasing securities for ₹ 56 lakhs. Fund management expenses for the month of April 2012 was ₹ 8 lakhs of which 10% was in arrears. In April 2012 the fund earned dividends amounting to ₹ 2 lakhs and it distributed 80% of the realized earnings. On 30-4-2012 the market value of the portfolio was ₹ 198 lakhs.

Mr. Akash, an investor, subscribed to 100 units on 1-4-2012 and disposed off the same at closing NAV on 30-4-2012. What was his annual rate of earning?

(Source: ICAI)

Question 12:

Mr. Suhail has invested in three Mutual Fund Schemes as given below:

Particulars	Scheme A	Scheme B	Scheme C
Date of investment	1-4-2011	1-5-2011	1-7-2011
Amount of Investment (₹)	12,00,000	4,00,000	2,50,000
Net Asset Value (NAV) at entry date(₹)	10.25	10.15	10.00
Dividend received up to 31-7-2011 (₹)	23,000	6,000	Nil
NAV as at 31-7-2011 (₹)	10.20	10.25	9.90

You are required to calculate the effective yield on per annum basis in respect of each of the three Schemes to Mr. Suhail up to 31-7-2011.

Take one year = 365 days.

Show calculations up to two decimal points.

(Source: ICAI)

Question 15:

The NAV of per unit of XYZ Mutual Fund (a Close Ended Funds) on 1.1.2014 was Rs. 28. The value on 31.12.2014 comes to Rs. 28.80. On the same date unit was trading in market at a premium of 3% though on 1.1.2014 same was trading at a discount at 5%. On 31.12.2014, XYZ distributed a sum of Rs. 2.80 as incomes and capital gains. You are required to compute rate of return to the investor during the year.

(Source: ICAI)

Question 22:

A Mutual Fund Company introduces two schemes - Dividend Plan and Bonus Plan. The face value of the Unit is ₹10 on 1-4-2014. Mr. R invested ₹ 5 lakh in Dividend Plan and ₹ 10 lakh in Bonus Plan. The NAV of Dividend Plan is ₹ 46 and NAV of Bonus Plan is ₹ 42. Both the plans matured on 31-03-2019. The particulars of Dividend and Bonus declared over the period are as follows:

Date	Dividend %	Bonus Ratio	NAV of Dividend Plan(₹)	NAV of Bonus Plan (₹)
31-12-2014	12%	-	47.0	42.0
30-09-2015	-	1:4	48.0	43.0
31-03-2016	15%	-	49.5	41.5
30-09-2017	-	1 : 6	50.0	44.0
31-03-2018	10%	-	48.0	43.5
31-03-2019	-	-	49.0	44.0

You are required to calculate the effective yield per annum in respect of the above two plans.

(Source: ICAI)

Question 32:

Following are the details of closed ended equity schemes of two mutual funds as on 31/08/2021:

Particulars	AJ Mutual Fund	RP Mutual Fund
NAV (p.u.)	₹ 80 (consisting 95% equity & remaining cash balance)	₹ 61(consisting ₹ 60 equity & remaining cash balance)
Sharpe Ratio	1.5	3
Treynor Ratio	1.2	10
Standard Deviation	10	6

There is no change in portfolios during the September month.

Monthly cost is ₹ 0.50 per unit for each mutual fund scheme.

Share market rose by 2% in the month of September.

You are required to calculate Expected NAV p.u. as on 30/09/2021 for both the schemes.

Question 33:

The returns of a portfolio A and market portfolio for the last 12 months are indicated as follows:

Month	Portfolio A	Market Portfolio
January	- 0.52	0.82
February	2.20	0.04
March	2.17	2.80
April	4.17	1.72
May	2.04	0.27
June	3.00	0.39
July	1.99	1.95
August	4.00	0.64
September	-1.38	1.53
October	2.67	2.70
November	3.99	2.52
December	1.86	2.09
Standard Deviation (σ)	1.6223	0.9498

- You are required to find out the monthly returns attributable to the sheer skill of the Portfolio Manager.
- What part of the monthly return is attributable to the higher risk assumed by the Portfolio Manager?

Assume that the risk-free rate of return is 12% per annum and the portfolio is fully diversified.

(Source: ICAI)

Question 34:

The following are the data on five mutual funds:

Fund	Return	Standard Deviation	Beta
A	15	7	1.25
B	18	10	0.75
C	14	5	1.40
D	12	6	0.98
E	16	9	1.50

You are required to compute Reward to Volatility Ratio and rank these portfolio using:

- Sharpe method and
- Treynor's method

Assuming the risk free rate is 6%.

(Source: ICAI)

Question 36:

On 1st April, an open ended scheme of mutual fund had 400 lakh units outstanding with Net Assets Value (NAV) of ₹19. At the end of April, it issued 5 lakh units at an opening NAV plus 2% load, adjusted for dividend equalization. At the end of May, 4 Lakh units were repurchased at the opening NAV less 2% exit load adjusted for dividend equalization. At the end of June, 60% of its available income was distributed.

In respect of April-June quarter, the following additional information is available:

Particulars	₹ in Lakhs
Portfolio value appreciation	515.67
Income of April	31.960
Income of May	46.125
Income for June	58.470

You are required to calculate:

- i. Income available for distribution;
- ii. Issue price at the end of April;
- iii. Repurchase price at the end of May; and
- iv. Net Asset Value (NAV) as on 30th June.

(Source: ICAI)

HOME WORK QUESTION

Question 11:

Sun Moon Mutual Fund (Approved Mutual Fund) sponsored open-ended equity oriented scheme “Chanakya Opportunity Fund”. There were three plans viz. ‘A’ – Dividend Re-investment Plan, ‘B’ – Bonus Plan & ‘C’ – Growth Plan.

At the time of Initial Public Offer on 1.4.2009, 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
28.07.2013	20		30.70	31.40	33.42
31.03.2014	70	5 : 4	58.42	31.05	70.05
31.10.2017	40		42.18	25.02	56.15
15.03.2018	25		46.45	29.10	64.28
31.03.2018		1 : 3	42.18	20.05	60.12
24.03.2019	40	1 : 4	48.10	19.95	72.40
31.07.2019			53.75	22.98	82.07

On 31st July 2019 all three investors redeemed all the balance units.

Calculate:

- Annual rate of return of Mrs. Charu who has invested in ‘A’ – Dividend Re-investment Plan.
- Annual rate of return of Mr. Anand who has invested in ‘B’ – Bonus Plan.
- Annual rate of return of Mr. Bacchan who has invested ‘C’ – Growth Plan.

Assumptions:

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

(Source: ICAI)

Question 12:

Z has Mutual Fund having 500 units has shown its NAV of ₹ 9.45 and ₹ 10.25 at the beginning and at the end of the year respectively. The Mutual Fund has given two options:

- Pay ₹ 0.85 per unit as dividend and ₹ 0.70 per unit as a capital gain, or
- These distributions are to be reinvested at an average NAV of ₹ 9.55 per unit.

Advice which option is preferable and what difference it would make in terms of return available.

(Source: ICAI)