

**Shri Shankaracharya Institute of Professional Management & Technology**  
**DEPARTMENT OF MANAGEMENT STUDIES**  
**QUESTION BANK**  
**SECURITY ANALYSIS & PORTFOLIO MANAGEMENT**

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**Unit – 1**

- Q1. "Stock exchange acts as barometers of the health of the economy." Discuss.
- Q2. "Stock exchange provides the linkage between the savings in the household sector and the investments in the corporate sector." Explain.
- Q3. Write short notes on:
- (a) OTCEI
  - (b) NSE
  - (c) ISE
  - (d) Depositories Act, 1996
- Q4. Describe the current status of the stock exchange in the country.
- Q5. Trace the growth and development of the stock market in India.
- Q6. What are the characteristics that an investor would like to have in an investment option? Explain each of these characteristics.
- Q7. Distinguish between investment and speculation.
- Q8. Describe the features that distinguish institutional investors from individual investors.
- Q9. Describe briefly the important investment avenues available to savers in India.
- Q10. State and explain the objectives of investment activity.
- Q11. Explain the concept of systematic risk. Why it is called systematic risk.
- Q12. Write short notes on:
- (a) Interest rate risk
  - (b) Market risk
  - (c) Purchasing power risk.

Q13. What is unsystematic risk? Explain the different types of unsystematic risk.

Q14. Calculate the expected return and the standard deviation of returns for a stock having the following probability distribution.

Probable Returns (%)	Probability of Occurrence
-24	0.05
-10	0.15
0	0.15
12	0.20
18	0.20
22	0.15
30	0.10

Q15. A stock costing Rs. 250 pays no dividends. The possible prices that the stock might sell for at the end of the year and the probability of each are:

Possible Prices	Probability
200	0.10
230	0.25
250	0.35
280	0.20
310	0.10

1. What is the expected return?
2. What is the standard deviation of the returns?

Q16. Monthly return data (in per cent) are presented below for ITC stock and BSE National Index for a 12 month period.

Month	ITC	BSE National Index
1	9.43	7.41
2	0.00	-5.33
3	-4.31	-7.35
4	-18.92	-14.64
5	-6.67	1.58
6	26.57	15.19
7	20.00	5.11
8	2.93	0.76
9	5.25	-0.97
10	21.45	10.44
11	23.13	17.47
12	32.83	20.15

Calculate the beta of ITC stock.

Q17. Monthly return data (in per cent) for ONGC stock & the NSE Index for a 12 month period are presented below:

Month	ONGC	NSE Index
1	9.43	7.41
2	0.00	-5.33
3	-4.31	-7.35
4	-18.92	-14.64
5	-6.67	1.58
6	26.57	15.19
7	20.00	5.11
8	2.93	0.76
9	5.25	-0.97
10	21.45	10.44
11	23.13	17.47
12	32.83	20.15

1. Calculate the alpha and beta for the ONGC stock.

## Unit - 2

- Q1. What is technical analysis.
- Q2. Explain the basic principle and hypothesis of Dow theory.
- Q3. Describe the formation of bullish trend and bearish trend in the market.
- Q4. What are price charts? Describe the different types of price charts used by technical analyst.
- Q5. Describe the chart patterns that help to identify trend reversal.
- Q6. "The Elliot Wave Theory is based on the principle that action is followed by reaction." Elucidate.
- Q7. What is Random Walk Theory?

- Q8. "When someone refers to efficient capital markets, they mean that security prices fully reflect all available information." Discuss.
- Q9. Explain the weak form of the efficient market hypothesis. Describe the empirical tests used for testing the weak form of efficiency.
- Q10. Compare and contrast the efficient market hypothesis with fundamental and technical analyses.
- Q11. An IT company currently pays a dividend of Rs. 5 per share on its equity shares. The dividend is expected to grow at 6% per year indefinitely. Stock with similar risk currently are priced to provide a 12 per cent expected return. What is the intrinsic value of the stock?
- Q12. Alfa Ltd. paid a dividend of Rs. 2 per share for the current year. A constant growth in dividend of 10 per cent has been forecast for an indefinite future period. Investor's required rate of return has been estimated to Rs. 15 per cent. The current market price of the share is Rs. 60. Would you buy the share?
- Q13. A company recently paid an annual dividend on its stock of Rs. 3 per share. The dividend is expected to grow at Rs. 1 per share for the next four years. Thereafter, the dividend is expected to grow at 6 per cent per year indefinitely. The required return on stock's with similar risk is 15 per cent. What is the intrinsic value of the stock?
- Q14. . A company recently paid an annual dividend on its stock of Rs. 3 per share. The dividend is expected to grow at Rs. 1 per share for the next four years. Thereafter, the dividend is expected to grow at 6 per cent per year indefinitely. The required return on stock's with similar risk is 15 per cent. What is the intrinsic value of the stock?
- Q15. The coupon rate is 15 per cent and maturity period is five year. The bond has a face value of Rs. 100 redeemable after five year at par. As the bond is newly issued the coupon rate will be the same as the market interest rate and the price of the bond will be equal to the face value. Calculate the duration of the bond.
- Q16. Jaya Ltd. has a 14 per cent debenture with a face value of Rs. 100 that matures at par in 15 years. The denature is callable in five years at Rs. 114. It currently sells for Rs. 105. Calculate each of the following for this debenture.

- a. Current yield
- b. Yield to call
- c. Yield to maturity

Q17. . A person owns a Rs.1000 face value bond with five years to maturity. The bond makes annual interest payment of Rs. 80. The bond is currently priced at Rs.960. given that the market interest rate is 10 per cent, should the investor hold the bond or sell the bond.

Q18. Find the duration of a 6 per cent coupon bond with a face value of Rs. 1000 making annual interest payments, if it has 5 years until maturity. The bond is redeemable at 5 per cent premium at maturity. The market interest rate is currently 8 per cent.

### Unit - 3

Q1. What is industry analysis?

Q2. Explain the concept of industry life cycle. Describe the different stages in the Industry life cycle.

Q3. "The first step in industry analysis is to determine the stage of growth through which the industry is passing." Explain.

Q4. Describe the various characteristics of an industry that an analyst must consider while doing the industry analysis.

Q5. How does the competitive condition in an industry affect the performance of the industry?

Q6. What is company analysis? Explain how financial ratios can be used to determine the strengths and weakness of a company.

Q7. "The level, trend and stability of earnings of a company depend upon a number of factors concerning the operations of the company," Discuss.

Q8. What is fundamental analysis?

Q9. "Fundamental analysis provides an analytical framework for rational investment decision making." Explain.

Q10. Describe the key economic variables that an investor must monitor as part of his fundamental analysis.

Q11. What is the significance of economic forecasting in fundamental analysis?

Q12. Briefly describe the techniques of short term economic forecasting.

Q13. Explain the barometer or indicator approach to economic forecasting.

### Unit – 4

Q1. Calculate the expected return and variance of a portfolio.

Security	Returns (%)	Proportion of investment
A	12	0.2
B	17	0.3
C	23	0.1
D	20	0.4

Q2. Calculate the portfolio variance and standard deviation for a portfolio with the following characteristics.

Security	$X_i$		Correlation coefficient
P	0.35	7	P & Q = 0.3
Q	0.25	16	P & R = 0.3
R	0.40	9	Q & R = 0.4

Q3. Calculate the expected return and variance of a portfolio comprising two securities, assuming that the portfolio weights are 0.75 for security 1 and 0.25 for security 2. The expected return for security 1 is 48% and its standard deviation is 12%. While the expected and standard deviation for security 2 are 22% and 20% respectively. The correlation between the two securities is 0.6.

Q4. The historical rates of return of two securities over the past ten years are given. Calculate the covariance and the correlation of the two securities.

Year	Security 1 (return %)	Security 2 (return %)
1	12	20
2	8	22
3	7	24
4	14	18
5	16	15
6	15	20
7	18	24
8	20	25
9	16	22
10	22	20

Q5. Given the following variance – covariance matrix for three securities, as well as the percentage of the portfolio that each security comprises, calculate the portfolio standard deviation.

Security	A	B	C
A	424	-190	120
B	-190	320	205
C	120	205	175
	$W_A = 0.35$	$W_B = 0.25$	$W_C = 0.40$



Q6. The estimates of the standard deviations and correlation coefficients for three stocks are given below:

Stock	Standard Deviation	Correlation with stock		
		A	B	C
A	32	1.00	-0.80	0.40
B	26	-0.80	1.00	0.65
C	18	0.40	0.65	1.00

Q7. Explain the concept of efficient frontier in the context of portfolio selection.

Q8. What is meant by optimal portfolio? How it is identified?

Q9. Explain the problems involved in portfolio selection process.

Q10. List the limitations of Markowitz model of portfolio selection.

Q11. Explain how portfolio return and risk are estimated under the single index model.

Q12. Illustrate the calculation of the expected return of a portfolio with an example.

Q13. What happens to the risk of a portfolio as more and more securities are added to the portfolio?

## Unit – 5

- Q1. Explain the Sharpe Index Model. How does it differ from the Markowitz model?
- Q2. List the assumption of capital asset pricing model.
- Q3. “When an investor is assumed to use riskless lending and borrowing in his investment activity, the shape of the efficient frontier transform into a straight line.” Illustrate.
- Q4. Write short notes on:
- (a) Capital market line
  - (b) Security market line
- Q5. Compare and contrast CML and SML.
- Q6. What is capital asset pricing model?
- Q7. Illustrate graphically how CAPM can be used for assessing whether a security is underpriced, overpriced or correctly priced.
- Q8. What is meant by portfolio revision?
- Q9. Describe the major constraints in portfolio revision.
- Q10. What factors necessitate portfolio revision?
- Q11. Describe the different situations where evaluation of performance of portfolios becomes necessary.
- Q12. “Portfolio evaluation essentially comprises two functions, performance measurement and performance evaluation.” Discuss.
- Q13. A security currently sells for Rs. 125. It is expected to pay a dividend of Rs. 4.25 and be sold for Ra. 140 at the end of the year. The security has a beta of 1.42. The risk free rate in the market is 6 per cent and the expected return on a representative market index is 15 per cent. Assess whether the security is correctly priced.

Q14. The estimated rate of returns, beta coefficients and standard deviations of some securities are as given below:

Security	Estimated return (%)	Beta	Standard Deviation
A	35	1.60	50
B	28	1.40	40
C	21	1.10	30
D	18	0.90	25
E	15	0.75	20
F	12	0.60	18

The risk free rate of return is 8%. The market return is expected to be 20%. Determine which of the above securities are overpriced and which are underpriced?

Q15. The following data are available to you as a portfolio manager:

Security	Estimated return (%)	Beta	Standard deviation (%)
1	32	2.10	50
2	30	1.80	35
3	25	1.65	42
4	20	1.30	26
5	18	1.15	29
6	15	0.85	18
7	14	0.75	20
8	12	0.50	17
Market index	16	1.00	25
Govt. Security	7.5	0	0

(a) In terms of security market line, which of the securities listed above are undervalued?

(b) Assuming that a portfolio is constructed investing equal proportion of funds in each of the above securities, what is the expected return and risk of such a portfolio?