



M.Com. (Semester – II) Examination, November 2018  
COC 204 : SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT  
(OA-18)

Duration : 3 Hours

Max. Marks : 60

- Instructions :**
- 1) This paper consists of **nine** questions carrying **equal** marks.
  - 2) Question No. 1 consists of **5 compulsory** questions of **2** marks **each**.
  - 3) Answer **any five** questions from Question No. 2, 3, 4, 5, 6, 7, 8 and 9.
  - 4) **Each** question carries **10** marks. Figures to the **right** indicate marks.
  - 5) Present value and logarithm tables will be supplied on **request**.
  - 6) The values given in brackets are **negative** values.

1. Answer the following in brief : (5×2=10)
  - A) Distinguish between systematic and unsystematic risk.
  - B) How do you measure Yield To Maturity (YTM) of a bond ?
  - C) Define random walk theory.
  - D) What is Jensen's ratio of portfolio evaluation ?
  - E) The expected return on the market portfolio and risk free return are estimated to 20% and 12% respectively. If required rate of return of stock X is 18, compute the beta of the stock.
2. What is investment ? Discuss the types of investments in terms of risk and return.
3. Define company analysis. Discuss the factors relevant to company analysis.
4. Define portfolio revision. Explain any two revision strategies.
5. A) RR Ltd., is expected to pay a dividend of Rs. 4 at the end of 1<sup>st</sup> year, a dividend of Rs. 7 at the end of 2<sup>nd</sup> year, a dividend of Rs. 11 at the end of 3<sup>rd</sup> year. From 4<sup>th</sup> year, onwards the dividends are expected to grow at a constant growth rate of 4%. If the required rate of return is 14%, calculate the present price of the stock.



B) Consider two bonds A and B. They have the following characteristics.

Particulars	Bond A	Bond B
Face Value (Rs.)	100	100
Coupon Rate (%)	14	14
Market Price (Rs.)	100	100
Term to Maturity (Years)	4	4
Coupon Payments	Annual	Annual

You are required to :

- i) Compute the Yield To Maturity (YTM) of Bond A and B.
- ii) If the interest rates fall by 1 percentage, what would be the new market price of the bonds ?

6. The historical rate of return on the stock of S Ltd., and market are given below :

Years	S Ltd. (%)	Market (%)
1	12	15
2	9	13
3	(11)	14
4	8	(9)
5	11	12
6	4	9

You are required to

- i) Determine the equation for the characteristic line of the stock of S Ltd.
- ii) Interpret the slope and the intercept of the characteristic line.



7. A) The market is expecting a return of 17.5% and the standard deviation of returns of the market is 22.5%, risk-free return is 7.5% in market.

Assuming the capital asset pricing model hold good, you are required to :

- i) Determine the expected return on an individual security with a standard deviation of 50% and beta of 1.73.
- ii) Determine the expected return and beta of an efficient portfolio with standard deviation equal to market standard deviation.
- iii) Calculate the expected return and beta of an efficient portfolio with a standard deviation equal to twice the standard deviation of the market.

B) Consider the following information relating to beta and expected returns of two portfolios :

Portfolio	Return (%)	Beta
A	14	1.00
B	16	1.00

Given the one-factor Arbitrage Pricing Theory (APT) model  
Expected return = 6% + 8  $\beta$ i1.

Show how arbitrage opportunities if any, can be exploited if the amount of investment is Rs. 10,000.

8. The following are risk and return estimates for two stocks :

Stock	Expected Return (%)	Beta	Firm Specific Standard Deviation of the Expected Return (%)
A	12	0.75	30
B	16	1.10	45

The market index has a standard deviation of 22% and risk-free rate on T-bill is 5%.

You are required to :

- i) Calculate the standard deviation of expected returns on Stock A and Stock B.



- ii) Suppose a portfolio is to be constructed with the following information :

Stock	Proportion
A	0.25
B	0.40
T-Bills	0.35

Calculate the expected return, standard deviation of expected return and non-systematic risk (Standard deviation) of the portfolio.

9. Given below is some key information pertaining to seven mutual funds :

Fund	Return (%)	Standard Deviation	Beta
A	4.50	16.10	0.94
B	15.40	18.20	1.09
C	9.00	17.90	1.09
D	12.90	20.40	1.22
E	12.30	17.60	1.04
F	9.00	16.10	1.00
G	6.40	17.9	1.04

The sustainable borrowing rate on 91-day T-bills of 6% is assumed as the Risk-free rate. Based on the above information, you are required to :

- Rank the seven funds using the sharpe' and Treynor portfolio performance ratios and interpret the result.
- Which of the above portfolio's is best diversified and which is least diversified ?