

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.**  
**(For candidates admitted during the academic year 2015-16 and thereafter)**  
**COURSE CODE: 15CM/ME/PF55**

**B.COM DEGREE EXAMINATION DECEMBER 2020**  
**COMMERCE**  
**FIFTH SEMESTER**

**COURSE : ELECTIVE**

**PAPER : PORTFOLIO MANAGEMENT**

**TIME : 90 MINUTES**

**MAX. MARKS: 50**

**Section – A**

**Answer All questions:**

**(3 x 2 = 6)**

1. Define Portfolio Management.
2. Write short note on Price Earnings Ratio.
3. A Rs.5,000 bond with a 10% coupon rate matures in 8 years and currently sells at 97%. Is this bond a desirable investment for an investor whose required rate of return is 11%?

**Section – B**

**Answer any Three questions:**

**(3 x 8 = 24)**

4. Explain pattern analysis with the help of diagrams.
5. ABC Ltd. Issues a 14% 10-year bond with face value and maturity value of Rs.1,000. What is the value of bond if the required rate of return is (i) 12% (ii)14% (iii)16%?  
Examine the difference in value.
6. A portfolio consisting of five securities is shown below: Calculate each stock's expected return. Then, using these individual security's expected returns, calculate the portfolio's expected return.

Stock	Initial Investment Value (Rs.)	Expected end of period Investment Value (Rs.)	Proportion of Portfolio's Initial market value
A	4,000	6,000	15%
B	2,000	3,500	9%
C	3,500	4,500	14%
D	9,000	11,000	38%
E	3,000	4,500	11%

7. Six portfolios experienced the following results during a 7 years period:

Portfolio	Average return	Standard deviation	Correlation with market
I	18.6	27.0	.81
II	14.8	18.0	.65
III	15.1	8.0	.98
IV	22.0	21.2	.75
V	-9.0	4.0	.45
VI	26.5	19.3	.63

The risk-free rate of interest is 9% and market risk is 12%.

Rank these portfolios using (i) Sharpe's, and (ii) Treynor's Ratio.

Compare the ranking and explain the reasons behind the differences.

### Section – C

Answer any One question:

(1 x 20 = 20)

8. Following information is available in respect of five securities:

Security	Expected Return	$\beta$	$\sigma^2_{ei}$
I	14	1.5	10
II	9	1.0	20
III	8	0.8	10
IV	12	1.5	20
V	15	1.0	30

Construct an optimal portfolio as per Sharpe Optimization Model given that Risk-Free Rate,  $I_{RF}$ , is 5% and the variance of the market,  $\sigma_M^2 = 10$ .

9. An investor is contemplating the construction of a portfolio for which he has short listed two securities X and Y. The expected return and Standard Deviation of these securities are as follows:

Security	Expected Return	Standard Deviation
X	9%	2%
Y	9%	4%

Find out the expected returns and standard deviation of the following portfolios given that the correlation coefficient between X and Y is -1.

Security X	Security Y
100%	0%
80%	20%
66%	34%
20%	80%
0%	100%

\*\*\*\*\*