

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.  
(For candidates admitted during the academic year 2004-2005 & thereafter)

SUBJECT CODE : CM/PS/SA45

**M.Com. DEGREE EXAMINATION APRIL 2008**  
**COMMERCE**  
**FOURTH SEMESTER**

COURSE : **SPECIALISATION**  
PAPER : **SECURITY ANALYSIS**  
TIME : **3 HOURS** **MAX. MARKS : 100**

**SECTION – A**

ANSWER ANY FIVE QUESTIONS: ( 5 x 8 = 40 )

1. Distinguish active and passive portfolio management styles outlining the strategies used therein.
2. What do you understand by the term “technical analysis”? Explain any two basic tools used therein.
3. With assumptions, explain in brief the significance of CAPM. What is the major criticism against this model?
4. Explain the risks faced by investors in relation to investment in bonds.
5. A zero coupon with a four year maturity period and face value of Rs.1,000 is currently sold to yield 15% to the investor.
  - a) Calculate the intrinsic value of the bond?
  - b) What do you think is the duration of this bond? Justify.
  - c) If the yield of zero coupon bonds with maturity periods of one, two and three years are respectively, 12%, 13.5% and 14% respectively, what can you comment on the forward interest rate for one year three years from now?

6. Examine whether a minimum variance portfolio can be created with the help of the following stocks. If yes, identify the same.

Economy	Probability	Return of A(%)	Return of B(%)
Normal	0.40	22%	18%
Good	0.40	30%	15%
Recession	0.20	15%	22%

7. XYZ Limited paid a dividend of Rs.2.00 for the current year. The dividend is expected to grow at 40% for the next 5 years and at 15% thereafter. The return on 182 days T-bills is 11% per annum and the market return is expected to be around 18% with a variance of 24%. The covariance of XYZ's return with that of the market is 30%. You are required to calculate the intrinsic value of the stock.

8. Mr. Akash is 30 years old. He plans to retire when he turns 50. He is looking at a retirement solution available with an insurance company that wants him to make a lumpsum payment of Rs.35,000 immediately against an annual pension for Mr. Akash post retirement for 20 years. If the expected return on this investment is 12% p.a. what do you think is the annual pension that Mr. Akash can expect? What are the risk inherent in this investment?

### SECTION – B

ANSWER ANY THREE QUESTIONS:

( 3 x 20 = 60 )

9. Mr. Ramesh has gathered the following information relating to six stocks:

Stock	Alpha (%)	Unsystematic risk (%) <sup>2</sup>	Total risk (%) <sup>2</sup>
HLL	2.20	55	95
TELCO	1.20	36	80
NIIT	1.10	20	65
SATYAM	1.35	15	40
BAJAJ AUTO	0.90	12	35
ACC	0.65	15	45

The risk free rate is 5%, return on the market index is 12% and the variance of the return on the index is 25(%)<sup>2</sup>.

You are required to construct a portfolio using Sharpe's Portfolio optimization model.

10. The following information is available about the stocks of two companies A and B:

#### Stock A

Expected Return (%)	Probability
- 5	0.05
12	0.55
15	0.35
20	0.05

#### Stock B

Expected Return (%)	Probability
5	0.05
15	0.65
18	0.20
20	0.10

Stock	Standard Deviation of Returns (%)
A	25
B	35

A portfolio is constructed by allocating the funds between A and B in the ratio of 2:3.

You are required to

- a) Calculate the expected return on the portfolio.
  - b) Calculate the portfolio risk and comment on the benefits of diversification.
11.
    - a) Explain the Markowitz Portfolio Theory stating the relevant assumptions.
    - b) With the help of relevant diagrams, explain as to how an investor can identify an optimal portfolio based on this theory.
  12.
    - a) Explain in brief the process of fundamental approach to security analysis.
    - b) Discuss the economic analysis.
    - c) With specific reference to the Indian environment as it exists today, what major conclusions can you draw if you were to use the economic analysis as part of fundamental approach to security analysis. Assume that you are analyzing the investment in banking and technology stocks.
  13.
    - i) A Research Analyst analyzing the shares of two companies A and B has compiled the following information –

	Company A	Company B
Face Value of shares (Rs.)	10	10
Current market price (Rs.)	80	20
Outstanding shares (in lakhs)	200	300
Estimated EPS after one year (Rs.)	6	2
Estimated DPS after one year (Rs.)	3	1
Expected growth rate – EPS and DPS	20%	15%
Beta (versus BSE National Index)	1.1	1.5
Current ratio	2.3	1.5
Assets / Equity	3	1
Fixed / Total operating costs	0.8	0.6
Estimated market price after one year		
- Optimistic (Rs.)	110	32
- Pessimistic (Rs.)	60	12

(Both scenarios are equally likely)

Required -

- a) Which stock would you purchase for a one year holding period? Why?
  - b) How do you account for the difference in the P/E ratio on the two stocks? (15 marks)
- ii) The return on Asset A one year from today is Rs.110 with certainty. Assets A's current price is Rs.100. The return on Asset B will be either Rs.90 with a probability of  $\frac{1}{2}$  or Rs.160 with a probability of  $\frac{1}{2}$ . The risk premium is 10%. Calculate the equilibrium price of Asset B. (5 marks)

