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Question Paper Code: CMB404

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

MBA III Semester End Examinations (Supplementary) - May, 2018

Regulation: IARE–R16

Security Analysis And Portfolio Management

Time: 3 Hours **(MBA)** **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Explain the five fundamental factors that influence the risk premium of an investment. **[7M]**

   (b) What are the five steps in the investment process? What is the importance of each step to the entire process? **[7M]**

2. (a) In a world of efficient capital markets, what do you have to do to be a superior analyst? How would you test whether an analyst was superior? **[7M]**

   (b) Explain the reason behind a support level and a resistance level. **[7M]**

UNIT – II

3. (a) The market model specifies a very simple relationship between a security's return and the return on the market index. Explain some "real world" complexities that might diminish the predictive power of the market model. **[7M]**

   (b) Dhananjay owns a portfolio of two securities with the expected returns , standard deviations, and weights as shown in Table 1. What correlation between the two securities produces the maximum portfolio standard deviation? What correlation between the two securities produces the minimum portfolio standard deviation? Show your calculations. **[7M]**

Table 1

Security	Expected Return (%)	Standard deviation (%)	Weight
A	10	20	0.35
B	15	25	0.65

4. (a) Why is the concept of arbitrage central to the asset pricing mechanism of APT? **[7M]**

   (b) Swathi owns a portfolio composed of three securities with the characteristics shown in Table 2. If the standard deviation of the market index is 18%, what is the total risk of Swathi's portfolio? **[7M]**

Table 2

Security	Beta	Standard Deviation Random error term (%)	Proportion
A	1.20	5	0.30
B	1.05	8	0.50
C	0.90	2	0.20

UNIT – III

5. (a) Identify the three most important determinants of the price of a bond. Describe the effect of each. **[7M]**

   (b) Calculate the duration of an 8 percent, Rs. 1,000 par bond that matures in 3 years if the bond's YTM is 10 per cent and interest is paid semiannually.

   i. Calculate this bond's modified duration.

   ii. Assuming the bond's YTM goes from 10 per cent to 9.5 per cent, calculate an estimate of the price change. **[7M]**

6. (a) What is meant by term structure of interest rates? Explain the theoretical basis of an upward sloping yield curve. **[7M]**

   (b) Aishwarya's portfolio manager advises her to buy a 7 year, Rs. 5,000 face value bond that gives 8 per cent annual coupon payments. The appropriate discount rate is 9 per cent. The bond is currently selling at Rs. 4,700. Should Aishwarya adhere to the manager's advice? **[7M]**

UNIT – IV

7. (a) Specify the major components for the calculation of economic value added and describe what a positive EVA signifies. **[7M]**

   (b) The current dividend on an equity share of Pioneer Technologyis Rs.3.00. Pioneer is expected to enjoy an above normal growth rate of 40% for 5 years. Thereafter, the growth rate will fall and stabilize at 12%. Equity investors require a return of 15% from Pioneer Technology's stock. What is the intrinsic value of the equity share of Pioneer Technology? **[7M]**

8. (a) Define an interest rate swap and briefly describe the obligation of each party involved. **[7M]**

   (b) The following information is available for the equity stock of Prakash Limited. S_0 = Rs. 120, E Rs. 110, r = 0.12, $\sigma = 0.40$. Calculate the price of a 6-month call option as per the Black-Scholes model. **[7M]**

UNIT – V

9. (a) Explain the two major factors that a portfolio manager should consider before designing an investment strategy. What types of decisions can a manager make to achieve these goals? **[7M]**

   (b) During the past three years, the Magnum Fund produced per share financial results as shown in Table 3 . Calculate the annual returns on an investment in the Magnum Fund during this period. **[7M]**

Table 3

	Year 1	Year 2	Year 3
NAV at beginning of year	13.89	14.40	15.95
NAV at end of year	14.40	15.95	15.20
Income distribution	0.29	0.33	0.36
Capital gains distribution	0.12	0.25	0.05

10. (a) As an investigator evaluating how well mutual fund managers select undervalued stocks or project market returns, discuss whether net or gross returns are more relevant. **[7M]**

(b) An Analyst want to evaluate Portfolio X, consisting entirely of equity stocks, using both the Treynor and Sharpe measures of portfolio performance. The Table 4 provides the average annual rate of return for portfolio X, the market portfolio (as measured by the BSE Sensex index), and Treasury bills during the past eight years.

Calculate both the Treynor and the Sharpe measure for both portfolio X and the BSE Sensex. Briefly explain whether portfolio X underperformed, equaled or outperformed the market. Explain the reason for the conflicting results when using the Treynor measure versus the Sharpe measure in the above calculation. **[7M]**

Table 4

	Annual average rate of return	Standard deviation of return	Beta
Portfolio X	10	18	0.60
BSE Sensex	12	13	1.00
T-bills	6	NA	NA