

Enrollment No.....



Faculty of Management
End Sem (Odd) Examination Dec-2017
MS5EF02 Security Analysis & Portfolio Management
Programme: MBA Branch/Specialisation: Management / Finance

Duration: 3 Hrs.**Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

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|-----|------|--|----------|
| Q.1 | i. | Which of the following is not a financial investment?
(a) Purchase of shares (b) Purchase of bonds
(c) Purchase of car (d) Purchase of debentures | 1 |
| | ii. | Liquidity risk
(a) Is risk investments bankers face
(b) Is lower for small OTC
(c) Is risk associated with secondary market transactions
(d) Increases whenever interest rates increases | 1 |
| | iii. | Bondholders usually receive interest payments every
(a) 1 year (b) 5 months (c) 2 months (d) 2 years | 1 |
| | iv. | The value of Bond depend on
(a) The coupon rate (b) Years to maturity
(c) Expected yield to maturity(d) All of these | 1 |
| | v. | A share whose market price is more than its intrinsic value is considered as
(a) Underpriced (b) Overpriced
(c) Fair price (d) None of these | 1 |
| | vi. | As per candle stick chart if there are white candle stick then its indication about price movement is
(a) Bullish (b) Bearish (c) Stagnant (d) None of these | 1 |
| | vii. | Capital Market Line is firstly initiated by
(a) Jensen (b) Linter (c) Markowitz (d) William Sharpe | 1 |

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- viii. Markowitz model presumed generally investors are **1**
 (a) Risk averse (b) Risk natural
 (c) Risk seekers (d) Risk moderate
- ix. Sharpe's measure is also known as **1**
 (a) Reward to variability (b) Reward to volatility
 (c) Both (a) and (b) (d) None of these
- x. Formula plan is related with **1**
 (a) Portfolio evaluation (b) Portfolio revision
 (c) Both (a) and (b) (d) None of these
- Q.2 i. Compare investment & speculation with example. **4**
 ii. How risk & return are related? Explain systematic & non systematic risk briefly. **6**
- OR iii. Calculate the variance & Standard deviation of returns from the given probability distribution of returns of an investment. **6**
- | | | | | | |
|------------------|------|------|------|------|------|
| Possible return% | 8 | 10 | 11 | 12 | 14 |
| Probability | 0.15 | 0.20 | 0.30 | 0.20 | 0.15 |
- Q.3 i. Describe bond immunization in brief. **4**
 ii. Explain any three models used for valuation of equities. **6**
- OR iii. (a) An investor purchased a bond for Rs. 1032.40 having par value Rs. 1000, coupon rate 12% and maturity period of four years. The interest payment is annual for which the first is yet to be received .What is the bond's yield-to-maturity (YTM)? **6**
 (b) What is the value of preference share, where the dividend rate is 18% on Rs. 100 par value? The discount rate of this risk level is 15%.
- Q.4 i. Write a note on Industry life cycle. **4**
 ii. Define fundamental analysis. What are its three components? **6**
 Explain briefly economic analysis.
- OR iii. Write short note: **6**
 (a) Company Analysis
 (b) Elliot wave theory

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- Q.5 Attempt any two: **5**
 i. What is Efficient Market Hypothesis? Explain three forms of market efficiency. **5**
 ii. What is Capital Market Line? Explain its use in calculating portfolio return. **5**
 iii. Security A has beta of 0.75 while security B has beta of 1.45. Calculate the expected return for these securities using CAPM. Given that risk free rate is 5% and expected return of the market is 14%. **5**
- Q.6 i. Explain portfolio performance evaluation technique. **4**
 ii. What is portfolio revision? Explain active and passive strategy to revise portfolio. **6**
- OR iii. Compare the following two portfolio on the basis of Sharpe and Treynor ratio **6**
- | Portfolio | Return from the portfolio | Std. Dev. | Beta |
|------------------|---------------------------|-----------|------|
| A | 10% | 13% | 0.4 |
| B | 20% | 26% | 3.0 |
| Market portfolio | 14% | 18% | 1.0 |

MS5EF02: security Analysis & Portfolio management

Dec 2017

Solution & scheme of marking

Q.1 (i) (c) Purchase of car

(ii) (c) is Risk associated with secondary market transaction

(iii) (a) 1 year

(iv) (d) All of these

(v) (b) overpriced

(vi) (a) Bullish

(vii) (c) Markowitz

(viii) (a) Risk averse

(ix) (a) Reward to variability

(X) (b) Portfolio Revision

Q 2(i) Investment & speculation with Example
2 marks each total 4 marks

2(ii) Risk & Return explained = 2 marks
Systematic & Non System. Risk = 4 marks

Q. 2 (iii) Calculation of Variance & Std. Deviation [6 marks]

Return (R_i)	Probability (P_j)	ER_i ($R_i \times P_j$)	$(R_i - ER_i)$	$(R_i - ER_i)^2$	$P_j \times [R_i - ER_i]^2$
8	0.15	1.2	-3	9	1.35
10	0.20	2	-1	1	0.2
11	0.30	3.3	0	0	0
12	0.20	2.4	1	1	0.2
14	0.15	2.1	3	9	1.35
		11	0	20	3.1

$$\text{Variance} = P_j \times [R_i - ER_i]^2$$

$$= 3.1$$

$$\text{Std. Deviation} = \sqrt{P_j \times [R_i - ER_i]^2}$$

$$= \sqrt{3.1}$$

$$= 1.76$$

Q. 3 (i) = Bond immunization = 4 marks

3 (ii) = only tree model = 2 marks each Total 6 marks

Q. 3 (iii) (a) Bonds yield to maturity = YTM (3 marks)

$$YTM = \frac{I + \frac{(F - P)}{n}}{0.4F + 0.6P} \times 100$$

Here $I = 1000 \times 12\% = 120$ Rs.

$F = 1000$ Rs.

$P = 1032.40$ Rs.

$n = 4$ years

$$YTM = \frac{120 + \left[\frac{1000 - 1032.40}{4} \right]}{0.4 \times 1000 + 0.6 \times 1032.40} \times 100$$

$$= \frac{120 + (-8.1)}{400 + 619.44} \times 100$$

$$= \frac{111.9}{1019.44} \times 100$$

$$= 10.97\%$$

$$YTM = 10.97\%$$

Q. 3 (iii) (b) Value of Preference share (3 marks)

$$V_p = \frac{D}{R}$$

Here $D = 100 \times 18\% = 18$

$R = 15\% \text{ or } .15$

$$V_p = \frac{18}{.15}$$

$$V_p = 120 \text{ Rs.}$$

Q. 4 (i) Industry life cycle = 4 marks

(ii) Fundamental Analysis = 2 marks

Three components explanation = 2 marks

Economic analysis explanation = 2 marks

(iii) Company analysis = 3 marks

Elliott wave Theory = 3 marks

attempt any two

Q. 5 (i) explanation of efficient market Hypothesis = 2 marks

Three forms of market efficiency = 3 marks

5(ii) Capital market line explanation = 2.5 marks

Use in calculating Portfolio Return = 2.5 marks

Q 5 (ii) 5 marks 2.5 marks for each A & B

CAPM = Capital Asset Pricing Model

Given = (R_f) Risk free rate of Return = 5%

$$\beta \text{ Beta of A} = 0.75$$

$$\beta \text{ Beta of B} = 1.45$$

Expected Return of the market = 14%

formula $CAPM = R_j = R_f + \beta(R_m - R_f)$

Using the formula

$$\begin{aligned} \text{for A} = R_j &= R_f + \beta(R_m - R_f) \\ &= 5 + 0.75(14 - 5) \\ &= 5 + 0.75 \times 9 \\ &= 5 + 6.75 \\ &= 11.75 \% \end{aligned}$$

$$\text{for B} = \beta = 1.45$$

$$\begin{aligned} R_j &= R_f + \beta(R_m - R_f) \\ &= 5 + 1.45(14 - 5) \\ &= 5 + 1.45 \times 9 \\ &= 5 + 13.05 \\ &= 18.05 \% \end{aligned}$$

Expected return of security A is 11.75%
B is 18.05%

(5)

Q. 6 (ii)

Sharpe Ratio & Treynor Ratio

3. marks each
Total 6 marks

$$\text{Sharpe Ratio} = \text{formula} = \frac{r_p - r_f}{\sigma_p}$$

where r_p = Return from the Portfolio r_f = Risk free rate of Return σ_p = Std. deviation of Portfolio

$$\text{for A} = \frac{10 - 8}{1.3} = 0.1538 \text{ or } 15.38\%$$

$$\text{for B} = \frac{20 - 8}{2.6} = 0.4615 \text{ or } 46.15\%$$

$$\text{Market Portfolio} = \frac{14 - 8}{1.8} = 0.33 \text{ or } 33.33\%$$

on the basis of Sharpe ratio Portfolio B is preferred

$$\text{Treynor Ratio formula} = \frac{r_p - r_f}{\beta_p}$$

where r_p = Return from the Portfolio r_f = Risk free rate of Return β_p = Beta of Portfolio

As for Treynor ratio

$$A = \frac{10 - 8}{1.4} = 5$$

$$B = \frac{20 - 8}{3} = 4$$

(6)

$$\text{Market Portfolio} = \frac{14 - 8}{1} = 6$$

on the Basis of Treynor Ratio Portfolio A is preferred.

Q. 6(i) = Portfolio Propr. Evaluation Technique = 4 marks

Q(ii) = Portfolio Revision meaning = 2 marks

Active Strategy = 2 marks

Passive Strategy = 2 marks