VPM's
DR VN BRIMS, Thane
Programme: MMS (2016-18) (Finance)
Third Semester Examination October 2017

| Subject | Security Analysis and Portfolio Management |  |  |
| :--- | :--- | :--- | :--- |
| Roll No. |  | Marks | $\mathbf{6 0}$ Marks |
| Total No. of Questions | 7 | Duration | 3 Hours |
| Total No. of printed pages |  | Date | $\mathbf{2 4 . 1 0 . 2 0 1 7}$ |

Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.
Q1) 20 Marks (Compulsory) Attempt Any FOUR from the Remaining SIX Questions
1A) The investment of Bank is as follows.

| Government Bonds | Coupon Rate | Purchase Rate(F V- <br> 100) | Duration (Years |
| :---: | :---: | :---: | :---: |
| GOI 2006 | 11.68 | 106.50 | 3.50 |
| GOI 2010 | 7.55 | 105.00 | 6.50 |
| GOI 2015 | 7.38 | 105.00 | 7.50 |
| GOI 2022 | 8.35 | 110.00 | 8.75 |
| GOI 2032 | 7.95 | 101.00 | 13.00 |

Face value of total investments in each government bond is 5 crores.
Calculate the actual investment in the portfolio.
1B) Explain different ways of valuation of securities? If you were an anlyst which methods will you adopt and why?

Q2) Any two from (a) or (b) or (c) ——— (5x2) =10 Marks
There are only two stocks and risk free assets in the market, the stocks are high tech cor portion and low tech corporation.
The stocks are High Tech Corporation and Low -Tech Corporation.

|  | Expected returns | Standard deviation of returns |
| :---: | :---: | :---: |
| High Tech - HT | $15 \%$ | $30 \%$ |
| Low Tech - LT | $8 \%$ | $10 \%$ |
| Risk free assets | $4 \%$ | $0 \%$ |
| Co relation between HT and LT | -0.10 |  |
| Co relation between HT and RF | 0 |  |
| Co relation between LT and RF | 0 |  |

Choose an optimal portfolio which will generate return in future.
The distribution of security $F$ and market portfolio $P$ is given as below.

| Probability | Security F (Return \%) | Security P (Return \%) |
| :---: | :---: | :---: |
|  |  |  |
| $\mathbf{0 . 3 0}$ | 30 | -10 |
| $\mathbf{0 . 4 0}$ | 20 | 20 |
| $\mathbf{0 . 3 0}$ | 0 | 30 |

a) You are required to calculate expected return of security F and the market portfolio $P$ the covariance between the market portfolio and security
b) Beta of the Security
c) A company is considering project $X$ and $Y$ with the following information, which project do you recommend based on the data given below.

| Project | Expected NPV | Standard Deviation |
| :--- | :---: | :---: |
| $X$ | 244000 | 177000 |
| $Y$ | 450000 | 235000 |

Q3) Any two from (a) or (b) or (c)
$(5 x 2)=10$ Marks
a) Rank the following stocks based on which you expect to generate the highest returns over the next three years ( 1 is the highest expected return and 9 the lowest)
Exxon Mobil Google $\qquad$ Wal-Mart $\qquad$ Apple $\qquad$ Toyota Motors $\qquad$ Ford Motors $\qquad$ Baidu $\qquad$ Citigroup $\qquad$ Goldman Sachs $\qquad$ Tata motors
b) Risk Measure for NYSE composite index and selected stocks.
c)

| Stocks | Industry | Average return- <br> 2002-2006 | Standard <br> deviation of <br> return | Beta |
| :---: | :---: | :---: | :---: | :---: |
| NYSE Index | Broad based <br> index of stocks | $9.02 \%$ | $11.92 \%$ | 1.00 |
| US Treasury <br> Bills | Measure of risk <br> free rate | $1.45 \%$ | $5.02 \%$ | 0 |
| ABN Ambro <br> Holding | Foreign Bank | $22.04 \%$ | $29.94 \%$ | 1.40 |
| CytRx Corp | Drugs | $35.58 \%$ | $105.03 \%$ | 0.55 |
| JDSiphase | Electronic | $-24.71 \%$ | $77.84 \%$ | 1.45 |
| YUM! Brands | Restaurant | $18.16 \%$ | $21.04 \%$ | 0.55 |

Base on CAPM assumption in behavioral Finance and investors expectation analyze the above table in detail.
d) Why do we see a huge selling of stocks during the month of January, give reasons.

Q4) Any two from (a) or (b) or (c) —— (5x2) = 10 Marks

| Years | Security 1 | Security 2 |
| :---: | :---: | :---: |
| 1 | 12 | 20 |
| 2 | 8 | 22 |
| 3 | 7 | 24 |
| 4 | 14 | 18 |
| 5 | 16 | 15 |
| 6 | 15 | 20 |
| 7 | 18 | 24 |
| 8 | 20 | 25 |
| 9 | 16 | 22 |
| 10 | 22 | 20 |

a) Calculate covariance from the above data
b) Calculate correlation coefficient.
c) Differentiate between SML and CML

Q5) Any two from (a) or (b) or (c) $(5 x 2)=10$ Marks

The beta co-efficient is 1.40. the company has been maintaining 8\% growth in dividend and earning. The last dividend paid was 4 per share. Return of gov securities is $10 \%$. Return on market portfolio is $15 \%$. the current market price of Target Ltd is Rs 30.
a) What will be the equilibrium price of Target Ltd.
b) Would you advise purchasing the share.
c) Explain what is New Issue Market?

Q6) Any two from (a) or (b) or (c) ——— (5x2) =10 Marks
Following is the data of 6 securities

| Securities | A | B | C | D | E | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Returns \% | 8 | 8 | 12 | 4 | 9 | 8 |
| Risk (SD) \% | 4 | 5 | 12 | 4 | 5 | 6 |

a) Which Security will be selected?
b) Assuming perfect correlation whether it is preferable to invest $75 \%$ insecurity $A$ and $25 \%$ in security $B$
c) Explain what are Mutual Funds?

Q7) Any two from (a) or (b) or (c) ——— (5x2) = 10 Marks
a) Explain the concept of investment Vs Speculation.
b) What is systematic risk and unsystematic risk? Explain with examples
c) Explain 3 forms of market efficiency as per efficient market hypothesis.

