Section C : Applied Theory (20 Marks)

- This section consists of questions with serial number 6 - 7.
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 25 - 30 minutes on Section C.

6. The concept of an industry life cycle includes various stages that can be applied to industries or product line within industries to complete the life cycle processes. Describe the various stages of industry life cycle. (1

7. *Valuation of real estate is a very important phenomenon which includes various characteristics that are different from that of the valuation of bonds. Explain.* (1

END OF SECTION C

END OF QUESTION PAPER

8. The purpose of immunization in bond portfolio management is to eliminate

   (a) Political Risk
   (b) Currency Risk
   (c) Inflation Risk
   (d) Liquidity Risk
   (e) Interest Rate Risk.

9. A zero-investment portfolio with a positive expected return arises when

   (a) An investor has downside risk only
   (b) There is a difference between risk free lending and borrowing rates
   (c) A risk free arbitrage opportunity exists
   (d) There is purchasing power parity

   (e) An investor has upside risk only.

10. Which of the following is **not** the characteristic of information ratio?

   (a) It estimates ex post value added and relates this to ex ante opportunity available in the future
   (b) It identifies the residual frontier that describes the opportunities accessible to the passive manager
   (c) It is the ratio of value added to residual risk incurred
   (d) It decides the level of aggressiveness for each manager
   (e) Value added depends on the managers' prospects and aggressiveness.

1. The excess return calculated as per Jensen's alpha is interpreted by Eugene Fama as

   (a) Return from net selectivity

aggressiveness.

The excess return calculated as per Jensen's alpha is interpreted by Eugene Fama as

(a) Return from net selectivity
(b) Return from inadequate diversification
(c) Return from total selectivity
(d) Return from manager's risk
(e) Return from business risk.

If systematic risk and unsystematic risk of a portfolio are 253 $(\%)^2$ and 300$(\%)^2$ respectively the percentage of variance of the portfolio returns **not** explained by the index is

(a) 14.23%
(b) 25.42%
(c) 45.75%
(d) 54.25%
(e) 62.50%.

The intrinsic value of an out-of-the-money call option is

(a) Call premium
(b) Stock price minus exercise price
(c) Negative
(d) Strike price
(e) Zero.

(ii) and (iii) above.

Which of the following techniques of measuring returns is used, when the fund is valued at regular intervals and not at each time when the cash flow occurs?

(a) Money weighted rate of return
(b) Time weighted rate of return
(c) Linked internal rate of return
(d) Average return
(e) Holding period return.

Six months ago, an investor bought shares of Xene Ltd. at ₹ 38 each. Today, the stock sells for ₹ 47. The investor now writes a ₹ 50 covered call at a premium of ₹ 1.15. The most this person can lose on his investment is

(a) ₹ 1.15
(b) ₹ 2.15
(c) ₹ 36.85
(d) ₹ 39.15
(e) ₹ 45.85.

(Please Turn

3. Ex-post SML can be used

I. For identifying the mispriced securities.
II. For testing asset-pricing theories.
III. For testing market efficiency.
IV. For evaluating stock option performance.

(a) Both (I) and (II) above
(b) Both (II) and (III) above
(c) Both (III) and (IV) above
(d) (I), (II) and (III) above
(e) (I), (III) and (IV) above.

The writer of a straddle anticipates

(a) Major fluctuations in the price of the underlying asset, *however, he is not able to* predict the direction of the fluctuations

(b) Minor fluctuations in the price of the asset and *he is able to* predict the direction of the fluctuations

(c) No major fluctuations in the price of the underlying asset and he is not able to predict the direction of the fluctuations

(d) Major fluctuations in the price of the asset and that there is a greater scope for upward price movement

(e) Major fluctuations in the price of the asset and that there is a greater scope for downward price movement.

8. Convexity of a bond can be viewed as the sensitivity of the

(a) Duration to the term to maturity
(b) Market price to the interest rates
(c) Market price to the duration
(d) Market price to the term to maturity
(e) Duration to interest rates.

9. The information ratio and the unsystematic risk of a portfolio are 0.56 and 3% respectively. If the realized return on the above portfolio is 14.75%, the return required by the investor will be approximately

(a) 11.09%
(b) 11.25%
(c) 13.07%
(d) 13.98%
(e) 14.15%.

30. In which stage of Life Cycle Model the investor is willing to go in for a high-risk, high-return investment?

(a) Consolidation phase
(b) Spending phase
(c) Gifting phase
(d) Maturity phase
(e) Accumulation phase.

END OF SECTION A

Section A : Basic Concepts (30 ...)

- **This section consists of questions with serial number 1 - 30.**
- **Answer all questions.**
- **Each question carries one mark.**
- **Maximum time for answering Section A is 30 Minutes.**

1. *Progress Tech Ltd., specializes in manufacturing Laptops. It is predominantly an asset rich firm. Some of its assets have experienced changes in their economic lives due to rapid technological changes. The Progress Tech Ltd., is said to have experienced*

   (a) Financial risk
   (b) Liquidity risk
   (c) Investment risk
   (d) Business risk
   (e) Credit risk.

Ms. Ruchi, an investor, selected Mr. Nikhil as her investment advisor with great care. She emphasizes on safety of capital while making investments and prefers to devote significant portion of her investments to government securities and guaranteed return investments. According to Bielard, Biehl and Kaiser five way model, Ms. Ruchi can be categorized as a/an

(a) Individualist
(b) Adventurer
(c) Celebrity
(d) Guardian
(e) Straight Arrow.

Ex-post SML can be used

... securities

A form of bond swap where an investor exchanges one bond for another to obtain a higher yield over the long-term, with little attention paid to the short-term outlook for the bond's perspective is called

(a) Substitution Swap
(b) Risk Neutral Swap
(c) Rate Anticipation Swap
(d) Risk Altering Swap
(e) Pure Yield Pickup Swap.

Which of the following methods of asset allocation does not talk any thing about how, where and when to invest?

(a) 100 Minus Your Age Method
(b) Cash Flow Needs Method
(c) Financial Objectives Method
(d) Risk-Tolerance Method
(e) Rebalancing without Futures Method.

Security 'X' has an expected return of 10% and a standard deviation of 22%. Security 'Y' has an expected return of 14% and a standard deviation of 18%. Rational investors will

(a) Borrow at the risk free rate and buy security 'X'
(b) Sell security 'Y' short and buy security 'X'
(c) Sell security 'X' short and buy security 'Y'
(d) Borrow at the risk free rate and buy security 'Y'
(e) Sell security 'Y' and lend at the risk free rate.

Which of the following portfolio evaluation measures depends upon the capital market line?

(a) Sharpe ratio
(b) Treynor ratio
(c) Reward to variability ratio
(d) Return from total selectivity
(e) Return due to net selectivity.

Which of the following is/are assumption(s) common to both Markowitz model and CAPM?

I. Investors can borrow and lend at risk free rate.
II. Investors have homogenous expectations regarding mean, variance and covariance of returns.
III. There are no market imperfections.
IV. Investors choose portfolios on the basis of expected returns and variance of returns.

(a) Only (IV) above
(b) Both (I) and (III) above
(c) Both (I) and (IV) above
(d) Both (III) and (IV) above
(e) All (I), (II), (III) and (IV) above.

14. Consider the following details of a portfolio consisting of four stocks:

Stock	Proportion	Beta
A	0.133	0.97
B	0.200	1.06
C	0.167	0.87
D	0.500	1.08

.129
.212
.145
.54

If the market return is 12.47% and the risk free rate is 6.5%, the expected return on the portfolio is approximately

6.5+5.97x1.026

(a) 13.75%
(b) 12.63%
(c) 11.50%
(d) 10.75%
(e) 10.50%.

15. Which of the following statements is/are **not true** with respect to strategic asset allocation?

I. It emphasizes on the changing risk tolerance levels of the investors.
II. It indicates an optimal asset mix to be held under normal market conditions.
III. It seeks to take the advantage of inefficiencies in different classes of securities on a continuous basis.

(a) Only (II) above
(b) Only (III) above
(c) Both (I) and (II) above
(d) Both (I) and (III) above
(e) Both (II) and (III) above.

7. Consider the following information pertaining to the coefficient of correlations of returns between different stocks:

Stocks	Kic Auto	Pee Cee	Mid Cyber	Jiv Agro	GVK Ltd.
Kic Auto	–	0.60	0.74	0.56	0.15
Pee Cee	0.60	–	–0.54	0.32	–0.40
Mid Cyber	0.74	–0.54	–	0.38	0.49
Jiv Agro	0.56	0.32	0.38	–	0.66
GVK Ltd.	0.15	–0.40	0.49	0.66	–

Each stock has an expected return of 16% and a standard deviation of 22%.

If your entire portfolio is composed of only stock of Kic Auto and you can add one more stock to your portfolio, the stock that you should select is

(a) Pee Cee
(b) Mid Cyber
(c) Kic Auto
(d) GVK Ltd.
(e) Jiv Agro.

(Please Tu

Section B : Problems/Caselet (50 Marks)

- This section consists of questions with serial number 1 – 5.
- Answer all questions.
- Marks are indicated against each question.
- Detailed workings/explanations should form part of your answer.
- Do not spend more than 110 - 120 minutes on Section B.

1. Consider the following information relating to the returns from two stocks and the market index in different economic scenarios:

Scenario	Probability of scenario	Return (%)		
		Stock A	Stock B	Market
Boom	0.15	20.5	25.5	12
Slow growth	0.25	9.0	7.5	10.5
Stagnation	0.35	–5.0	4.5	–12.5
Recession	0.25	5.0	8.0	2.0

From the above information, you are **required** to calculate the unsystematic risk of the two stocks.

(12marks)

2. A portfolio manager is considering the following two bonds for inclusion in the portfolio:

   I. Bond A is a 30-year maturity bond, currently selling at ₹ [illegible]. It pays an annual coupon @ [illegible]% on the face value of ₹ 100.

   II. Bond B is a 25-year maturity bond, currently selling at ₹ 90.5. It pays an annual coupon @ 8.25% on the face value of ₹ 100.

   He forecasts that after 5 years, a 25-year bond will give a YTM of 10% and a 20-year bond will give a YTM of 9%. You are **required** to determine the bond to be selected by the portfolio manager if his investment horizon is five years and reinvestment rate during the investment horizon is 5% p.a.

(11marks)

3. The settlement price of a Nifty futures contract, on a particular day in a particular month of the year 2010 on NSE was 5462.35. The multiple associated with each contract is 50.

   The initial margin for the contract is ₹ 15,000 and the maintenance margin is set at ₹ 12,000. The settlement prices on subsequent eight days were as follows:

Day	Settlement price
1	5477.90
2	5408.70
3	5415.45
4	5402.40
5	5471.85
6	5486.15
7	5479.40
8	5576.95

   You are **required** to calculate the mark-to-market cash flows, the daily closing balances and net profit (or loss) in the account of an investor who has gone:

4. Duration of a bond portfolio is 3 years and its average YTM is 12.50%. If average YTM decreases to 12.30%, percentage change in the value of the portfolio is approximately

(a) –0.47%
(b) +0.47%
(c) –0.53%
(d) +0.53%
(e) –0.96%.

5. According to Jack Treynor, key motives for trading are value, information and

(a) Volume
(b) Profitability
(c) Liquidity
(d) Cash flow
(e) Impact cost.

6. Active portfolio management consists of

I. Market timing.
II. Indexing.
III. Security Analysis.

(a) Only (I) above
(b) Only (III) above
(c) Both (I) and (II) above
(d) Both (I) and (III) above
(e) All (I), (II) and (III) above.

a. Long at 5462.35.

b. Short at 5462.35.

(5 marks

(5 marks

Caselet

Answer the following questions based on the given Caselet:

4. As mentioned in the caselet, great benefit of blue chip stocks is that when the economy dives into a recession, blue chips usually stand up better than other stocks. Not only during economic turmoil, under normal conditions also, adding blue chip stocks to the portfolio helps in reducing the risk. In light of this, how do you identify blue chip stocks? And also analyze the basic theme of including blue chip stocks in the portfolio. (10 mark

5. A good company may not always be a good investment. In this context, substantiate the argument that constructing a portfolio of excellent or well managed companies does not always yield benefits. And also suggest the precautions to be taken by the investor before investing in blue chip stocks. (7 marks)

Despite their reputation as boring, stodgy and perhaps even a little outdated, blue chip stocks have long reigned supreme in the portfolio of retirees, non-profit foundations and conservative individuals. Blue Chip stock has always made up an important part of investors' portfolios. But like most things in life, there is an upside and a downside to investing in Blue Chip stock. On the one hand, it is considered a low risk investment because it is stock of economically stable and prestigious companies. It is easy to follow in the news; we can often hear or read up on its progress. On the other hand, it usually yields a lower dividend than some of the more 'risky' small cap stock.

Everyone always hunts for a great bargain, and with the recent turmoil in the stock market, it further increased around the markets. The best time to invest in blue chip stocks is when they are steeply discounted. The term 'Blue Chip' stock commonly refers to high quality stock from leading companies. They are usually high in price, regarded as safe and are known to pay good dividends. They make up the core of the BSE Sensex and NSE Nifty so their price usually follows the index's growth. The term is said to have originated as an allusion to the most valuable chips used in casinos for gambling. Some examples of Blue Chip stock are ONGC, SBI, Reliance Industries, Infosys etc.

Blue Chip stocks are traditional companies with a long history of high expectation and steady earnings. Year over year, these stalwart investments provide the backbone of a conservative portfolio. Since they are so steady, stock prices have risen over the past twenty years or so to make most blue chip stock purchases prohibitive to add to most portfolios.

But the recent decline in the overall state of the market makes now the perfect time to add blue chip stocks to a portfolio. These stocks will be the first to surge on news of a recovery.

The phrase "blue chip" comes from the world of casino's, where blue chips are the highest and most valuable playing chip. It's poetic that a phrase borrowed from the gambling world is applied to what some considers the most boring and steady stocks on the exchange. Blue Chip stocks are considered a gold crown in any

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Section C : Applied Theory (20 Marks)

- This section consists of questions with serial number 6 - 7.
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 25 - 30 minutes on Section C.

6. In recent years, equity style management has attracted great attention from the investment community. The popularity of style investing is evident from the number of style funds coming up. Describe the concept of style investing and also discuss different types of equity styles. (10marks)

7. In context of investments, risk is referred as variability of expected return or it is an attempt to quantify the probability of actual return being different from expected return. Discuss three main components of risk. (10marks)

END OF SECTION C

END OF QUESTION PAPER

Risk premium + Time value of money +

18. The CML is upward sloping because

I. It shows the optimum combination of risky securities.
II. It contains all securities weighted by their respective market values.
III. Investors are risk-averse.

(a) Only (I) above
(b) Only (III) above
(c) Both (I) and (II) above
(d) Both (I) and (III) above
(e) Both (II) and (III) above.

19. Which of the following statements is/are **true** with respect to constant mix strategies?

I. These strategies are more static in nature.
II. Risk tolerance level of the investors varies with the level of their wealth.
III. When the stock markets are perfectly capable of reversing themselves, such reversals favor the constant mix strategies over the buy and hold strategies.

(a) Only (I) above
(b) Only (III) above
(c) Both (I) and (II) above
(d) Both (I) and (III) above
(e) Both (II) and (III) above.

20. The inability to satisfy the investor's objectives is termed as

(a) Portfolio risk
(b) Tracking error risk
(c) Attribution risk
(d) Performance risk
(e) Fund risk.

21. As per historical observation, Sensex provides a return of 14% and Treasury bills yield 7%. As per CAPM, which of the following securities is/are undervalued?

Security	β_i	Expected Return (%)
Allied Steel	1.3	17.8
United Drugs	1.0	14.0
Organic Media	1.8	20.4
Ugine Fertilizer	1.7	18.0

(a) Allied Steel
(b) United Drugs
(c) Ugine Fertilizer
(d) Allied Steel and Organic Media
(e) Allied Steel and Ugine Fertilizer.

investment portfolio, and the potential to make incredible sums of money, just like in gambling, exist in today's market.

Investors can buy at almost historic lows and wait for the market to correct. By investing in companies with solid historic returns and investor stands a greater chance of making huge sums of money on the next market run up. Investing in Blue Chip stocks at the time of turmoil is smart investing, since bargain sale pricing is in effect.

One way that some people have tried to mitigate failures in stock market investing is to invest in blue chip stocks. Blue-chip stocks usually pay high dividends and are thought to be safer or at least less risky than other stocks.

However, a good company may not always be a good investment. Limiting to only blue chips may result in being too conservative. Keeping in blue chips to around 30% of overall portfolio is optimal. But, going beyond that is not advisable.

Because, there is nothing to guarantee that Blue Chip stock will continue to value itself but there have been sufficient indications so far to indicate we are in heading toward improvement. If you are careful enough, you can invest significant amounts and still take advantage of the situation.

END OF CASELET

END OF SECTION B