PTSA Assignment

Unit 2

Q1) Compared to exchange-traded funds (ETFs), open end mutual funds are typically associated with lower
⇒ A) Brokerage Costs. and C) Management fees

Q2) Private Equity and Venture capital funds:-
⇒ D) All the above

Q3) Hedge funds most likely:-
⇒ C) Are not offered for sale to the general public

Q4) Low risk tolerance and high liquidity requirements best describe the typical investment needs of:
⇒ C) Insurance Company.

Q5) A long time horizon and low liquidity requirements best describe the investment needs of:-
⇒ A) an endowment.

Q6) Which of the following is least likely an example of a portfolio constraint?
⇒ C) Minimum total return requirement of 8%.

Q7) For Asset allocation purposes, asset classes should be specified such that correlations of returns are relatively:
⇒ B) High within each assets class and low among Asset classes.

Q8) In determining the appropriate asset allocation for a client's investment account, the manager should:
⇒ C) Consider the investor's risk tolerance and future needs, but not forecasts of market conditions.

Q9)
⇒ Willingness and Ability to take risk :-

As a responsible Financial advisor, you should always be putting your clients in suitable investments that corresponds with both their willingness and Ability to take on risk.

Willingness to take risk measures subjective aspects of risk tolerance, including a client's personality, how they react to real or potential losses, and what their goals and priorities are.

Ability to take on risk measures objective aspects like time horizon, age, the need for income, and family situation.

Willingness and ability to take risk may not always match up.

For Eg:- ~~the~~ An individual with high Assets and low liabilities may ~~not~~ have a high ability to take on risk, but may also be conservative by nature and express a low willingness to take on risk.

In this case, the willingness to take on a risk and ability differ and will affect the ultimate portfolio construction process. A suitable investment is one that is appropriate in terms of an investors willingness and ability to take on a certain level of risk.

Q10)

⇒ Components of IPS:-

- Introduction:- Description of the client.
- Statement of Purpose:- Purpose of IPS.
- Statement of Duties and Responsibilities:-
This section details the duties and responsibilities of the client, the custodian of the client's assets, and the investment managers
- Procedures:- This section explains the clients' objectives in investing.
- Investment objectives:- This section explains the clients objectives in investing.
- Investment Constraints:- This section presents the factors that constrain the client in seeking to achieve the investment objectives.
- Investment Guidelines:- Information regarding policy execution and on specific types of assets excluded from investment, if any
- Evaluation and Review:- This section provides guidance on obtaining feedback on investment results.
- Appendices:- (A) Strategic ~~Allo~~ Asset Allocation
(B) Rebalancing Policy.

Many investors specify a strategic asset allocation (SAA) also known as the policy portfolio, which is the baseline allocation of portfolio asset to asset classes in the view of the investors investment obj and the investor's policy with respect to rebalancing asset class weights.

9 Q11.)

⟹ Liquidity :- The IPS should detail the likely withdrawal of funds from the portfolio. For institutions, there could be rules around this, like spending requirements in the case of endowmend funds. When a client has a known liquidity requirement, the portfolio manager should allocate a portion of the portfolio to cover this liability by ensuring that the allocated assets can quickly be converted to cash whenever the obligation needs to be met.

Time Horizon :- The IPS should state the time horizon over which the client is investing.

Q13.)

Diversification Ratio

$$= \frac{\text{SD of equally weighted portfolio}}{\text{SD of randomly selected security}}$$

$$= \text{sqrt}(324\%\%) / \text{sqrt}(625\%\%)$$

$$= 18/25 = \underline{0.72}$$

Q14.)

Investors	Risk Tolerance	Investment Horizon	Liquidity Needs	Income Need.
Individual	Varies	Varies	Varies	Varies.
Banks	Low	Short term	High to meet repayment	To pay int on deposits and operational expenses.
Endowment	High	Long term	Low	To meet spending requirements
Insurance	Low	Short term for P&C, Long term for life Ins	High to meet claims	Low
Mutual funds	Varies by fund	Varies by fund	Open ended- high Close ended- low	Lao
Defined Benefit pensions	High	Long term	Depends on maturity of plan	High for mature funds, low for growing funds.

Q15.)

→ Defined Contribution Benefit Plans:-

DC plans are retirement plans in the employee's name usually funded by both the employee and the employer. With DC plans, individuals will invest part of their wages while working, expecting to draw on the accumulated funds to provide income during retirement or to transfer some of their wealth to their heirs. The key to a DC plan is that the employee accepts the investment and inflation risk and is responsible for ensuring that there are enough assets in the plan to meet their needs upon retirement.

Defined Benefit pension plans:- DB plans are company sponsored plans that offer employees a predefined benefit on retirement. The future benefit is defined because the DB plan requires the plan sponsor to specify the obligation stated in terms of the retirement income benefits owed to participants.

UNIT - 4

Q1.) Firms and industries are most appropriately classified as cyclical and non-cyclical based on:-

⟹ B.) the sensitivity of their earnings to the bussiness cycle.

Q2.) An analyst should most likely include two firms in the same peer group of analysis if the firms:

⟹ C.) derive their revenue and earnings from similar bussiness activities.

Q3.) The industry experience curve shows the cost per unit relative to:-

⟹ A.) Output.

Q4.) Which of the following is least likely an element of an industry straterg ic analysis?

⟹ A.) Market Correlations.

Q5.) Two of the five competitive forces in the Porter Framework are:-

⟹ B.) Power of suppliers and threat of substitutes.

Q6.) Greater pricing power is most likely to result from greater.

⟹ B.) Market Conentration.

Q7.) Which of the following statements best describes the relationship between pricing power and ease of entry and exit? Greater ease of entry:-
⟹ A.) and greater ease of exit decrease pricing power.

Q8.) Industry overcapacity and increased cost cutting characterize which stage of the industry life cycle?
⟹ C.) Maturity.

Q9.) Which of the following firms would most appropriately be valued using an asset-based model?
⟹ B.) A paper firm located in a country that is experiencing high inflation.

Q10.) Which type of valuation model is viewed as having the disadvantage of producing results that may not be comparable across firms?
⟹ B) Price multiple Models.

Q11.)

⇒ Porter's five forces that determine industry competition:-

- The threat of Entry to the industry depends on barriers to entry, or how difficult it would be for new competitibos to enter the industry. Industries that are easy to enter will generally be more competitive than industries with high barriers to entry.
- The power of suppliers, which may be able to raise prices or restrict the supply of key inputs to a company. For example, workers at a heavily unionized company have greater bagaining power as suppliers of labour than workers at a comparable non-unionized company. Suppliers of scarce or limited parts of elements often possess significant pricing power.
- The power of buyers, which can affect the intensity of competition by exerting influence on suppliers regarding prices (and possibly other factors such as product quality)
- The threat of substitutes, which can negatively affect demand if customers choose other ways of satisfying their needs. For eg:- consumers may trade down from premium beers to discount brands during recessions. Low priced brands may be close substitutes for premium brands which, when consumer budgets are constrained, reduces the ability of premium brands to maintain or increase prices. Substitutes do not have to be similar but can satisfy a need with a very different product.
- The rivalry among existing competitors, which is a function of the industry's competitive structure. Industries that are fragmented among many small competitors, have high fixed costs, provide undifferentiated products or have high exit barriers usually experience intense rivalry.

Q(12.)

9 ⟹ Macroeconomic influences:- Cyclical or structural trends may have significant effects on the demand for an industry's products or services. An industry's sales and profitability may be impacted by gross domestic product, interest rates, credit availability or inflation.

12 Technological Influences:- New technologies create new or improved products that can radically change an industry and change how other industries use the products to conduct their operations.

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Demographic Influences:- Changes in population size, the distribution of age and gender and other demographic characteristics may have significant effects on economic growth and the amount and types of goods and services consumed.

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Governmental influences:- Governments may have a significant influence on industries through their ability to control tax rates and their status as major purchasers of goods and services from a range of industries. Governments may also exert their influence indirectly by

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empowering other regulatory to govern the affairs of an industry.

Social influences:- Societal changes involving how people work, spend their money, enjoy their leisure time, and conduct other aspects of their lives can significantly affect the sales of various industries.

Q13:)

⇒ Stock splits :- It involves an increase in the number of shares outstanding with a consequent decrease in share price.

• Reverse stock splits :- It involves a reduction in the number of shares outstanding with a corresponding increase in share price.

• Share repurchases :- (Cash dividend payments)
A share repurchases is a transaction in which a company uses cash to buy back its own shares

• Cash dividends :- Payments ~~at~~ regularly at known intervals.

• Extra dividends :- A dividend that supplements regular cash dividends with an extra payment.

• Stock dividends :- It is a type of dividend in which a company distributes additional shares of its common stock to shareholders instead of cash.

Q14:)

⇒ Free cash flow to equity is a measure of how much cash is available to the equity shareholders of a company after all expenses reinvestment, and debt are paid. It is a measure of equity capital usage.

$$FCFE = CFO - FCInv + \text{Net borrowing}.$$

Q15) $D_0 = ₹12$,
$r = 10\%$

Year	Growth
1	12%
2, 3	9%
4	8%
5 onwards	5%

$D_1 = 12(1.12) = 13.44$.
$D_2 = 13.44(1.09) = 14.65$.
$D_3 = 14.65(1.09) = 15.97$
$D_4 = 15.97(1.08) = 17.25$

$$V_0 = \frac{13.44}{(1.1)} + \frac{14.65}{(1.1)^2} + \frac{15.97}{(1.1)^3} + \frac{17.25}{(1.1)^4} + \frac{1}{(1.1)^4}\left(\frac{17.25(1.05)}{0.05}\right)$$

$= 48.17 + 247.4216242$.
$V_0 = 295.5916242$

Q16.) EV = Mrkt cap + MV of debt − cash & investments.

$= 50 \times 160000 + 700000 - 200000$

$= 8500000$

EBITDA = 1,000000

$\frac{EV}{EBITDA} = \underline{\underline{8.5}}$

Q17.)

$P = \frac{D_0 (1+g)}{K_e - g}$

$P/E = \frac{D_0 (1+g)}{E (ke - g)}$

$\frac{P}{E_1} = \frac{D_1}{E_1 (ke - g)}$

$\frac{P}{E_1} = \frac{40\%}{(12\% - 4\%)}$

$\frac{P_1}{E_1} = \underline{\underline{5}}$

Unit 3

Q1.)

	P	Q
R	10%	15%
S	20%	25%

$\sigma = 0.5$

$$w_p = \frac{\sigma_q^2 - Cov(P,q)}{\sigma_p^2 + \sigma_q^2 - 2Cov(P,q)}$$

$$w_p = \frac{0.2^2 - 0.2 \times 0.25 \times 0.5}{0.2^2 + 0.25^2 - 2 \times 0.2 \times 0.25 \times 0.5}$$

$$w_p = \frac{2}{7} = 0.28571$$

$$w_q = 1 - w_p = 1 - \frac{2}{7} = \frac{5}{7} = 0.714.$$

Q2.)

	L	M
R	20%	22%
S	15%	18%

$\rho = -1$

$$w_1 = \frac{\sigma_2}{\sigma_1 + \sigma_2} \Rightarrow w_1 = \frac{18\%}{15\% + 18\%} \Rightarrow w_1 = \frac{6}{11} = 0.5454$$

$$w_2 = \frac{\sigma_1}{\sigma_1 + \sigma_2} \Rightarrow \frac{15\%}{15\% + 18\%} = \frac{5}{11} = 0.4545$$

Q3)

	A	B	C
E(R)	27	24	22
σ	33	28	26

$\rho_{AB} = 0.2$, $\rho_{BC} = 0.32$, $\rho_{AC} = 0.5$

$w_1 = \frac{1}{3}$, $w_2 = \frac{1}{3}$, $w_3 = \frac{1}{3}$

$$E(R) = \frac{1}{3} \times 27 + \frac{1}{3} \times 24 + \frac{1}{3} \times 22$$

$$= 9 + 8 + \frac{22}{3}$$

$$E(R) = 24.33\%$$

$$Var_p = \left(\frac{1}{3} \times 33\right)^2 + \left(\frac{1}{3} \times 28\right)^2 + \left(\frac{1}{3} \times 26\right)^2$$

$$+ 2w_1 w_2 \sigma_1 \sigma_2 \rho_{AB} + 2w_1 w_3 \sigma_1 \sigma_3 \rho_{AC}$$

$$+ 2w_2 w_3 \sigma_2 \sigma_3 \rho_{BC}$$

$Var_p = 405.414\%^2$

$\sigma_p = 20.134\%$