Multiple choice Questions(20 points)

1. Differences between hedge funds and mutual funds are that

A, hedge funds are only subject to minimal SEC regulation.

B. hedge funds are typically open only to wealthy or institutional investors.

C. hedge fund managers can pursue strategies not available to mutual funds such as she selling, heavy use of derivatives, and leverage.

D. hedge funds are commonly structured as private partnerships.

E. hedge funds are only subject to minimal SEC regulation, are typically open only to or institutional investors, fund managers can pursue strategies not available to mutual such as short selling, heavy use of derivatives, and leverage, and are commonly struct private partnerships.

2. According to modern portfolio theory, the idea that investors with different indiffi

the same portfolio of risky securities is a result of

A. diminishing marginal utility of income

B. covariance

C. the separation theorem

D.the normal distribution assumption

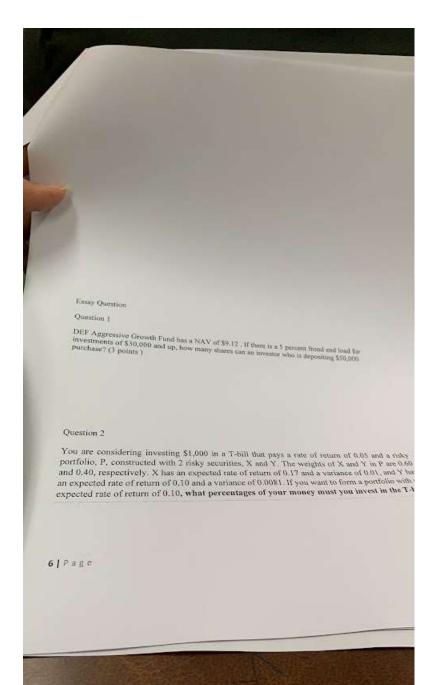
3. In a portfolio consisting of the risk free asset and/or a risky asset, what is the you borrow 25% of your net worth by selling short the risk free asset and inve

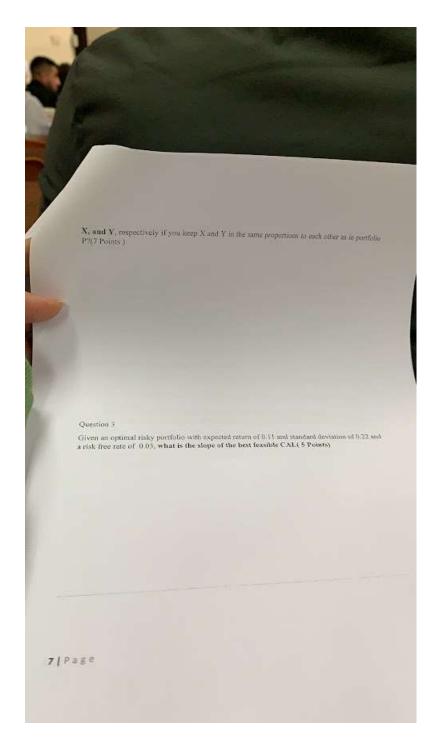
$$Rm = .15 Rf = .05 \text{ om} = .2 \text{ Beta} = 1$$

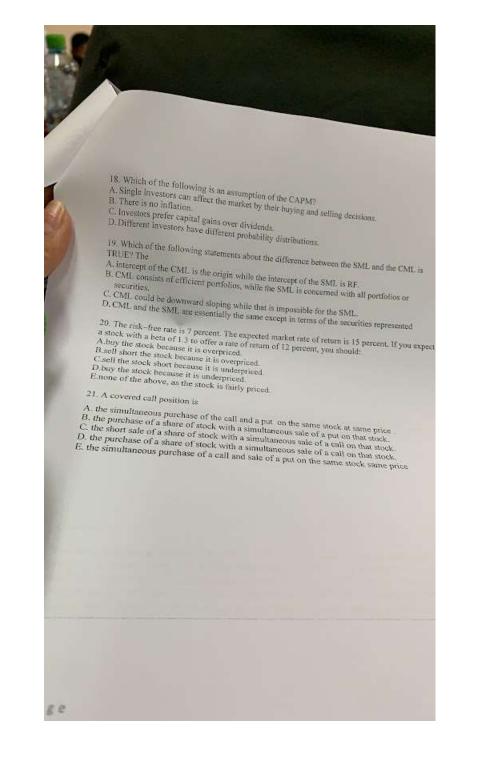
A. .2

B. .1875

C. .175







First, let's calculate the load fee that the investor will have to pay:

Load fee = 5% x \$50,000 = \$2,500

This means that the investor will have \$47,500 available for investment after paying the load fee.

Now, let's calculate the number of shares that can be purchased:

Number of shares = Amount available for investment / NAV

Number of shares = \$47,500 / \$9.12

Number of shares ≈ 5,207.24

Therefore, the investor can purchase approximately 5,207.24 shares of the DEF aggressive growth fund with an investment of \$50,000 after paying the 5% load fee.

## Question 4 (15 points)

Stock	RETURN	SD	CORRELATION
A	0.11	0.2	0.4
В	0.095	10.11	
LBILL	0.035		DEGREE OF RISK AVERSE
			A+5.5

Answer the below questions using the above table

- 1. WHAT IS THE OPTIMAL WEIGHT FOR (A) PORTFOLIO CONSIST OF A AND B
- (3 points)

  2. WHAT IS THE OPTIMAL WEIGHT FOR (B) PORTFOLIO CONSIST OF A AND
- B(3 points)

  3. WHAT IS THE RETURN OF THE OPTIMAL PORTFOLIO? (2 points)

  4. WHAT IS THE STANDARD DEVIATION OF THE OPTIMAL PORTFOLIO? (3
- points)
  5. WHAT IS THE WEIGHT OF THE RISKY ASSETS IN THE COMPLETE OPTIMAL
- PORTFOLIO? (2 points)

  6. WHAT IS THE STANDARD DEVIATION OF THE COMPLETE OPTIMAL. PORTFOLIO? (2 points)

T. BILL		X and Y in the same proportions	to each other as in portfolio
Question 3			
Given an	mal riets.		
risk free rate	of 0.03, what is the slo	expected return of 0.11 and standard dev pe of the best feasible CAL( 5 Points)	destina e e a a
wi	The rick asse	Le CAL( 5 Points)	nation of 0.22 and
_	Rb-Rr	76. <b>4</b> .	
	Rb-RS A/NAR	=	
	1171V+15		
		-0.11-0.03	
		-011-0.03	0.05d5
			=0.0505
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To find the optimal weight for a portfolio consisting of stocks A and B, we can use the formula for the weight of stock A in the optimal portfolio:

$$W(A) = [(E(r A) - r f) / (A * \sigma_A^2 + B * \sigma_B^2 + 2 * A * B * \sigma_A * \sigma_B * \rho_A B)]$$

where W(A) is the weight of stock A in the portfolio, E(rA) is the expected return of stock A, r f is the risk-free rate, A is the degree of risk aversion,  $\sigma$  A and  $\sigma$  B are the standard deviations of stocks A and B, respectively,  $\rho$  AB is the correlation coefficient between the two stocks, and B = 1 - A.

Plugging in the values given, we get:

$$W(A) = [(0.11 - 0.035) / (5.5 * 0.2^{2} + (1 - 5.5) * 0.11^{2} + 2 * 5.5 * (1 - 5.5) * 0.2 * 0.11 * 0.4)]$$

W(A) = 0.436 (rounded to three decimal places)

Therefore, the optimal weight for stock A in the portfolio is 0.436.

