MCQ

Q1: Stock A has annual expected return variance of 20%, while stock B has annual expected return variance of 10%. What is the expected return variance of a portfolio invested 60% in stock A and 40% in stock B? Assume that the returns of both stocks have zero covariance

1. 29.66%
2. 8.8%
3. None of these
4. 15%

Q2: Using the same setup as Question 3, now assume that the two stocks have a covariance of 0.5. Compute the new portfolio variance [1 d.p]

1. 7.5%
2. 57.27%
3. 32.8%
4. None of these

Q3: Neglecting the risk free rate, what is the annualized sharpe ratio of the portfolio constructed in Q3 and Q4 if the expected returns of stock A is 20% per year, and 10% for stock B (to 1 d.p)

1. 1.1 (Q3), 0.32 (Q4)
2. None of these
3. 1.0 (Q3), 0.5 (Q4)
4. 1.8 (Q3), 0.5 (Q4)

Q4: For survival analysis estimating the effect of a government program on firm survival / bankruptcy, what is the best analysis framework?

1. Principal Components Analysis
2. None of these
3. Proportional Hazards Cox model
4. Estimate parameters for a Poisson model

Section B: Capital Markets Theory

1. What is the relationship between Jensen's Alpha (intercept in CAPM) and market efficiency?

2. Compare and contract a cross sectional based trading strategy (e.g. equity long-short market neutral) with a time series market timing based strategy

3. If the 95% VaR (value at risk) for a portfolio is USD$1,000,000, then for 5 trading days out of 100, we expect that the portfolio will:
    a. Lose around USD$1,000,000
    b. Lose more than USD$1,000,000
    c. Lose less than USD$1,000,000