Chapter 5 : Risk Model

Multiple Choice Questions

Question 1.

Which of the following concepts directly measures the risk of derivatives?

A. Probability
B. Delta and gamma
C. Beta and standard deviation

Question 2.

A one-year project has a 3% chance of losing USD 10 million, a 7% chance of losing USD 3 million, and a 90% chance of gaining USD 1 million. What are (a) the VaR and (b) the expected shortfall when the confidence level is 95% and the time horizon is one year?

Question 3.

Which of the following actions is least likely a component of the validation and independent review of stress tests?

A. Using expert-based judgment
B. Testing data during nonstress periods
C. Communicating stress-test results to all stress-test users
D. Reviewing the qualitative but not the judgmental aspects of stress tests

Question 4.

A. An organization's risk management function has computed that a portfolio held in one business unit has a 1 percent weekly value at risk (VAR) of £4.25 million. Describe what is meant in terms of a minimum loss.
B. The portfolio of another business unit has a 99 percent weekly VAR of £4.25 million (stated using a confidence limit approach). Describe what is meant in terms of a maximum loss.

Question 5.

An organization's 5 percent daily VAR shows a number fairly consistently around €3 million. A backtest of the calculation reveals that, as expected under the calculation, daily portfolio losses in excess of €3 million tend to occur about once a month. When such losses do occur, however, they typically are more than double the VAR estimate. The portfolio contains a very large short options position.

A. Is the VAR calculation accurate?
B. How can the VAR figure best be interpreted?
C. What additional measures might the organization take to increase the accuracy of its overall exposure assessments?

Question 6.

What are the two types of sovereign debt rated by ratings agencies?

Question 7.

What is reverse stress testing?

Question 8.

Which of the following reasons least likely explains local currency defaults?

A. Countries may decide that the costs of higher inflation are less than the costs of default.
B. Countries may decide that the costs of currency debasement are higher than the costs of default.
C. Shared currencies like the euro make it difficult for countries to control their own monetary policy.
D. Prior to 1971, the use of the gold standard prior made it more difficult for some countries to print money.

Question 9.

What does the delta-normal model assume?

Question 10.

Which of the following are methods commonly used to supplement VaR to measure the risk of extreme events?

A. Standard deviation
B. Loss given default
C. Scenario analysis and stress testing

Question 11.

Which of the following statements is not correct?

A. A 1% VaR implies a downward move of 1%.
B. A one standard deviation downward move is equivalent to a 16% VaR.
C. A 5% VaR implies a move of 1.65 standard deviations less than the expected value.

Question 12.

Is local currency debt rated more highly or less highly than foreign currency debt? Discuss the reasons for your answer.

Question 13.

Which of the following reasons best explains why institutions use reverse stress tests?

A. To identify liquidity risk
B. To identify risk concentrations
C. To assess where multiple risks occur simultaneously
D. To test events that threaten the viability of the institution

Question 14.

A portfolio has a 5% weekly VAR of $3 million. Which of the following is most accurate?

A. The same portfolio's 1% weekly VAR is more than $3 million.
B. The same portfolio's 1% weekly VAR is $3 million.
C. The same portfolio's 1% weekly VAR is less than $3 million.

Question 15.

Which of the following key variable inputs is least likely to be incorporated into stress-test models?

A. A 5% decrease in the stock market
B. A decline in GDP of 300 basis points
C. An increase in interest rates of 300 basis points
D. A 5% increase in the national unemployment rate

Question 16.

You invested $25,000 in the stock of Dell Computer Corporation in early 2011. You have compiled the monthly returns on Dell's stock during the period 2006–2010, as given below.

2006	2007	2008	2009	2010
–0.0214	–0.0347	–0.1824	–0.0723	–0.1017
–0.0106	–0.0566	–0.0070	–0.1021	0.0264
0.0262	0.0158	0.0010	0.1114	0.1344
–0.1196	0.0862	–0.0648	0.2257	0.0786
–0.0313	0.0675	0.2378	–0.0043	–0.1772
–0.0362	0.0609	–0.0512	0.1867	–0.0953
–0.1137	–0.0203	0.1229	–0.0255	0.0978
0.0401	0.0100	–0.1156	0.1831	–0.1110
0.0129	–0.0230	–0.2416	–0.0360	0.1020
0.0652	0.1087	–0.2597	–0.0531	0.1099
0.1196	–0.1980	–0.0844	–0.0228	–0.0816
–0.0789	–0.0012	–0.0833	0.0170	0.0250

Using the historical method, compute the following:

A. 5 percent monthly VAR.

B. 1 percent monthly VAR.

Question 17.

How is expected shortfall defined?

Question 18.

Which of the following statements about governance structure is accurate?

A. Senior management has ultimate oversight responsibility and accountability for an entire institution.
B. The board of directors has responsibility for implementing authorized stress-testing activities.
C. The board of directors can change an institution's capital levels and exposures following a review of stress-test results.
D. Senior management should use scenario analysis, not stress testing, to evaluate an institution's risk decisions.

Question 19.

You have accumulated 100 daily returns for your $100,000,000 portfolio. After ranking the returns from highest to lowest, you identify the lowest five returns:
–0.0019, –0.0025, –0.0034, –0.0096, –0.0101
Calculate daily VaR at 5% significance using the historical method.

Question 20.

Which of the following is not an advantage of VaR?

A. It is a simple concept to communicate.
B. There is no widespread agreement on how to calculate it.
C. It can be used to compare risk across portfolios or trading units.

Question 21.

Which of the following statements accurately reflects a Basel Committee stress-testing principle?

A. Stress-testing models should be reviewed at least twice per year.
B. Stress-test results should not be communicated beyond senior management and the board.
C. The risk captured in a stress-testing framework should be comprehensive, ranging from mild to extreme.
D. Stress-testing framework objectives should be aligned with the overall risk management framework.

Question 22.

If a company has a one- day 5% Value at Risk of $1 million, this means:

A. 5% of the time the firm is expected to lose at least $1 million in one day.
B. 95% of the time the firm is expected to lose at least $1 million in one day.
C. 5% of the time the firm is expected to lose no more than $1 million in one day.

Question 23.

What is the most accurate approach to scenario analysis for a portfolio that uses options?

A. Apply the scenario to option delta.
B. Apply the scenario to option delta + gamma.
C. Fully reprice the options using the market returns specified under the scenario.

Question 24.

Which of the following statements regarding the measurement of risk for nonlinear derivatives is true?

I. A disadvantage of the delta-normal approach is that it is highly computational.
II. The full revaluation approach is most appropriate for portfolios containing mortgage-backed securities or options with embedded features.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

Question 25.

A junior risk analyst made the following statements during a risk-management committee meeting.

Statement 1: VAR can be difficult to estimate and different methods may yield different VAR values.

Statement 2: VAR considers only the downside risk and fails to incorporate upside benefits. Which of the statements is most accurate?

A. Statement 1 only.
B. Statement 2 only.
C. Both are accurate.

Question 26.

An investment fund has an estimated 1% daily value at risk (VaR) of $150,000 using the variance/covariance method. Assuming that there are 250 independent trading days in a year, and that the mean daily return is not different from zero, which of the following values is closest to the 1% annual VaR estimate for the fund?

A. $1.8 million
B. $2.4 million
C. $3.8 million

Question 27.

$\rho(X + Y) \leq \rho(X) + \rho(Y)$ is the mathematical equation for which property of a coherent risk measure?

A. Monotonicity
B. Subadditivity
C. Positive homogeneity
D. Translation invariance

Question 28.

Which of the following statements about documentation of stress tests is most appropriate?

A. Institutions are not concerned if their vendors document stress-testing activities.
B. Institutions should incentivize documenting stress tests to increase efficiency.
C. Documentation is not useful for stress-test developers, but it is important to senior management.
D. Documentation should not include a description of the types of stress tests and methodologies, but it should include a description of the key assumptions and limitations.

Question 29.

A. A firm runs an investment portfolio consisting of stocks as well as options on stocks. Management would like to determine the VAR for this portfolio and is thinking about which technique to use. Discuss a problem with using the analytical or variance–covariance method for determining the VAR of this portfolio.

B. Describe a situation in which an organization might logically select each of the three VAR methodologies.

Question 30.

Which of the following statements most likely describes an advantage of using stressed risk metrics?

A. The risk metric will be more realistic.
B. The risk metric will be more conservative.
C. The risk metric will mirror the portfolio returns.
D. The risk metric will respond to current market conditions.

Question 31.

Which of the following is a limitation of the historical simulation method?

A. The past may not repeat itself.
B. A reliance on the normal distribution.
C. Estimates of the mean and variance could be biased.

Question 32.

Each of the following statements about VAR is true except:

A. VAR is the loss that would be exceeded with a given probability over a specific time period.
B. Establishing a VAR involves several decisions, such as the probability and time period over which the VAR will be measured and the technique to be used.
C. VAR will be larger when it is measured at 5 percent probability than when it is measured at 1 percent probability.
D. VAR will be larger when it is measured over a month than when it is measured over a day.

Question 33.

Ravi Chowdhury, a portfolio manager for a hospital foundation, is considering the inclusion of sovereign bonds in the fixed income portion of the foundation's portfolio. Chowdhury, much to the surprise of his colleagues, plans to purchase the bonds of a country that has long been under authoritarian rule. He cites "lower political risk" when asked about his investment decision. Which of the following statements best supports his assertion of lower risk?

A. Authoritarian regimes are more likely to control corruption in government agencies.
B. Government policies that may affect debt repayment are often more stable under an authoritarian regime.
C. Relative to a democracy, risks are greater on a day-to-day basis, but the effects are less detrimental overall.
D. In most authoritarian countries, property rights are protected and property disputes are settled quickly.

Question 34.

Which of the following statements about the historical simulation method of estimating VaR is most correct?

A. A 5% historical simulation VaR is the value that is 5% to the left of the expected value.
B. A 5% historical simulation VaR is the value that is 1.65 standard deviations to the left of the expected value.
C. A 5% historical simulation VaR is the fifth percentile, meaning the point on the distribution beyond which 5% of the outcomes result in larger losses.

Question 35.

Which of the following statements best reflects the responsibilities of an internal audit?

A. An internal audit should not assess the staff involved in stress-testing activities.
B. An internal audit must independently assess each stress test used.
C. An internal audit should review the manner in which stress-testing efficiencies are identified and tracked.
D. The internal audit function needs to be impartial but does not need to be independent.

Question 36.

Which of the following is not a limitation of VaR?

A. It does not adjust for bonds of different durations.
B. It largely relies on recent historical correlations and volatilities.
C. It can be inaccurate if the size of positions held is large relative to available liquidity.

Question 37.

A call option and a mortgage-backed security are good examples of

A. a linear and nonlinear derivative, respectively.
B. a nonlinear and linear derivative, respectively.
C. linear derivatives.
D. nonlinear derivatives.

Question 38.

Management for Lever Bank has been tasked by its board of directors with updating the corporate governance process for stress testing. Updating this process is likely to exclude which of the following elements?

A. The actions that will be taken on the results
B. A plan for how senior management will assess the results
C. Revisiting the assumptions underlying the modeled scenarios
D. The alignment of institutionally defined stress tests to mirror those of external regulations

Question 39.

Each of the following statements accurately reflects why stress testing is an appropriate risk management tool except

A. normal market conditions can present a false sense of security.
B. the extreme scenarios that are modeled are unlikely but still possible.
C. extreme events tend to have a high probability of occurrence with a moderate impact.
D. an institution must have sufficient liquid assets and capital to survive an extreme event.

Question 40.

Relative to other measures of risk, stress testing is more likely to

A. use relatively short time horizons.
B. capture both positive and negative events.
C. capture a large number of extreme scenarios.
D. be forward-looking without providing probabilities for loss distributions.

Question 41.

CA Arghya Sen believes a stock's price in the next quarter depends on two factors: the direction of the overall market and whether the company's next earnings report is good or poor. The possible outcomes and some probabilities are illustrated in the tree diagram shown below:

Based on this tree diagram, the expected value of the stock if the market decreases is closest to:

A. $62.50.
B. $26.00.
C. $57.00.

Question 42.

Are sovereign credit ratings more or less stable than corporate credit ratings?

Question 43.

Which of the following is not a reason that expected shortfall (ES) is a more appropriate risk measure than value at risk (VaR)?

A. For normal distributions, only ES satisfies all the properties of coherent risk measurements.
B. For nonelliptical distributions, the portfolio risk surface formed by holding period and confidence level is more convex for ES.
C. ES gives an estimate of the magnitude of a loss.
D. ES has less restrictive assumptions regarding risk/return decision rules than VaR.

Question 44.

Because the asset price is $20.00, a long position in 100 call option contracts (i.e., 10,000 options) has a current notional value of $200,000. The options are at-the-money (ATM) with percentage (per option) delta of 0.60. The asset has a volatility of 18.0% per annum. If we assume returns are i.i.d. normal and a year contains 250 trading days, which is nearest to the 99.0% 10-day value at risk (VaR) under a delta-normal assumption; i.e., if assume only delta's linear approximation (delta-Normal) and ignore gamma?

A. $7,605
B. $10,066
C. $15,252
D. $21,018

Question 45.

How does diversification decrease a country's economic risk?

Question 46.

Which of the following statements regarding foreign currency defaults is most accurate?

A. In recent years, defaults have often been followed by military actions.
B. Greater central bank independence means less difficulty for a country to print money.
C. Prior to the 20th century, no country had ever defaulted on funds borrowed in a foreign currency.
D. Countries are more likely to default on funds borrowed from foreign banks than on sovereign bond issues.

Question 47.

Given a VaR of $12.5 million at 5% for one month, which of the following statements is correct?

A. There is a 5% chance of losing $12.5 million over one month.
B. There is a 95% chance that the expected loss over the next month is less than $12.5 million.
C. The minimum loss that would be expected to occur over one month 5% of the time is $12.5 million.

Question 48.

Do authoritarian governments lead to greater country risk than democratic governments. Why or why not?

Question 49.

What is the difference between a linear and a non-linear portfolio?

Question 50.

The best definition of value at risk is:

A. the expected loss if a counterparty defaults.

B. the maximum loss an organization would expect to incur over a holding period.

C. the minimum loss expected over a holding period a certain percentage of the time.

Question 51.

The following are the sorted worst 20 monthly returns of a technology stock in the past 15 years (180 months).

1. −0.4947
2. −0.4568
3. −0.4363
4. −0.4275
5. −0.4171
6. −0.3851
7. −0.3845
8. −0.3500
9. −0.3358
10. −0.3291
11. −0.3254
12. −0.3249
13. −0.3088
14. −0.3049
15. −0.3018
16. −0.2675
17. −0.2396
18. −0.2384
19. −0.2312
20. −0.2304

Using the historical method, the 10% monthly VAR is closest to:

A. −32.91%

B. −30.18%

C. −23.84%

Question 52.

What is the relationship usually assumed between the VaR with 99% confidence for a ten-day time horizon and the VaR with 99% confidence for a one-day time horizon?

Question 53.

List five things that should be included in the policies and procedures for stress testing.

Question 54.

Why is Japan's debt-to-GDP ratio so high?

Question 55.

Which of the following is an advantage of the Monte Carlo method?

A. The VaR is easy to calculate with a simple formula.
B. It is flexible enough to accommodate many types of distributions.
C. The number of necessary simulations is determined by the parameters.

Question 56.

Which of the following statements regarding stress scenarios is incorrect? A contagion effect

A. results from a crisis event.
B. increases diversification benefits.
C. occurs with a rise in both volatility and correlation.
D. causes a different return generating process in the underlying asset.

Question 57.

Which of the following statements regarding linear and nonlinear derivatives is true?

A. The delta of a linear derivative is equal to one.
B. A forward contract is an example of a nonlinear derivative.
C. A linear derivative's delta must be constant for all levels of value for the underlying factor.
D. The value of the call option changes at a constant rate with the change in the value of the underlying stock.

Question 58.

Why might a country decide to default on its local currency debt rather than print more money? Assume the country is not on the gold standard and could print more money if it was inclined to do so.

Question 59.

Which of the following is a limitation of VaR?

A. It requires the use of the normal distribution.
B. The maximum VaR is prescribed by federal securities regulators.
C. It focuses exclusively on potential losses, without considering potential gains.

Question 60.

Explain the role of (a) validation and independent review and (b) an internal audit in stress testing.

Question 61.

When will the Monte Carlo method of estimating VaR produce virtually the same results as the parametric method?

A. When the Monte Carlo method assumes a non-normal distribution.
B. When the Monte Carlo method uses the historical return and distribution parameters.
C. When the parameters and the distribution used in the parametric method are the same as those used in the Monte Carlo method, and the Monte Carlo method uses a sufficiently large sample.

Question 62.

What are some possible consequences for a country defaulting on its debt?

Question 63.

What does TVAR stand for?

A. Total VAR.
B. Tail VAR.
C. Trailing VAR.

Question 64.

Do correlations tend to increase or decrease during stressed market conditions?

Question 65.

Distinguish briefly the role of the board and senior management in a well-designed stress-testing framework.

Question 66.

The parameters of normal distribution required to estimate parametric VaR are:

A. expected value and standard deviation.
B. skewness and kurtosis.
C. standard deviation and skewness.

Question 67.

To ensure its survival, a financial institution should focus on two key outputs from stress testing. What are they?

Question 68.

What factors are considered in determining the rating of a South American country's debt?

Question 69.

If there are 400 simulations on the loss (gain) from an investment, how is VaR with a 99% confidence level calculated?

Question 70.

Consider a $10 million portfolio of stocks. You perform a Monte Carlo simulation to estimate the VAR for this portfolio. You choose to perform this simulation using a normal distribution of returns for the portfolio, with an expected annual return of 14.8 percent and a standard deviation of 20.5 percent. You generate 700 random outcomes of annual return for this portfolio, of which the worst 40 outcomes are given below.

–0.400	–0.320	–0.295	–0.247
–0.398	–0.316	–0.282	–0.233
–0.397	–0.314	–0.277	–0.229
–0.390	–0.310	–0.273	–0.226
–0.355	–0.303	–0.273	–0.223
–0.350	–0.301	–0.261	–0.222
–0.347	–0.301	–0.259	–0.218
–0.344	–0.300	–0.253	–0.216
–0.343	–0.298	–0.251	–0.215
–0.333	–0.296	–0.248	–0.211

Using the above information, compute the following:

A. 5 percent annual VAR.
B. 1 percent annual VAR.

Question 71.

Which of the following is not a limitation of scenario measures?

A. It is difficult to ascribe probability to a given scenario.
B. Scenario measures assume a normal distribution, and market returns are not necessarily normal.
C. They risk being an infinite task; one cannot possibly measure all of the possible future scenarios.

Question 72.

How is VaR defined?

Question 73.

The expected annual return for a $100,000,000 portfolio is 6.0% and the historical standard deviation is 12%. Calculate VaR at 5% probability.

Question 74.

Explain the homogeneity and subadditivity conditions necessary for a coherent risk measure.

Question 75.

Why is the delta-normal imprecise for non-linear portfolios?

Question 76.

Name three countries that have defaulted on their debt since 2010.

Question 77.

What is a coherent risk measure?

Question 78.

An investment has a uniform distribution where all outcomes between -40 and +60 are equally likely. What are the VaR and expected shortfall with a confidence level of 95%?

Question 79.

Consider a position consisting of a USD 10,000 investment in asset X and a USD 20,000 investment in asset Y. Assume that the daily volatilities of X and Y are 1 % and 2% and that the coefficient of correlation between their returns is 0.3. What is the five-day VaR with a 97% confidence level?

Question 80.

What are the important aspects of a country's legal risk?

Question 81.

Statement : A one-year project has a 3% chance of losing USD 10 million, a 7% chance of losing USD 3 million, and a 90% chance of gaining USD 1 million. What are (a) the VaR and (b) the expected shortfall when the confidence level is 95% and the time horizon is one year?

Suppose that there are two independent identical investments with the properties specified in statement. What are (a) the VaR and (b) the expected shortfall for a portfolio consisting of the two investments when the confidence level is 95% and the time horizon is one year?

Question 82.

Check whether (a) VaR or (b) expected shortfall satisfy the subadditivity axiom for a coherent risk measure for the investments in Question 81.

Question 83.

Explain the information provided by VaR, stressed VaR, and stress testing.

Question 84.

In what ways was the stress testing carried out prior to the 2007-2008 crisis inadequate?

Question 85.

"It is important that risk managers consider the same scenarios each month so that trends can be identified." Discuss this statement.

Question 86.

Why do you think some shareholders want the chairman of the board of a company to be a different person from the chief risk officer?

Question 87.

What is the difference between stressed VaR, stressed ES, and stress testing?

Question 88.

Which of the following statement is correct?

A. VaR not only falls with the confidence level but also rises at the rate, which is increasing.
B. VaR only rises with the confidence level, but the rate at which it rises remains constant.
C. VaR falls with the rise in the confidence level.
D. VaR not only rises with the confidence level but also rises at the rate, which is increasing.

Question 89.

If we are computing VaR by the variance covariance method, what is the linear exposure in case of positions in bonds?

A. Delta
B. Gamma
C. Duration
D. Beta

Question 90.

Which of the following is a limitation of the historical simulation method?

A. The computation time is quite high.
B. This method is expensive.
C. There may not be enough historical data.
D. It is difficult to calculate.

Question 91.

A bank should enhance its stress testing methodologies to capture the effect of

A. Credit Risk
B. Country Risk
C. Reputation Risk
D. Operational Risk

Question 92.

Given a VaR of $15.5 million at 1% for one month, which of the following statements is correct?

A. There is a 1% chance of losing $15.5 million over one month.
B. There is a 99% chance that the expected loss over the next month is less than $15.5 million.
C. The minimum loss that would be expected to occur over one month, 1% of the time is $15.5 million.
D. In 1% of the worst circumstances, the maximum loss would exceed $15.5 million.

Question 93.

A portfolio has a 5% weekly VAR of $3.867 million Which of the following statements is correct?

A. The same portfolio's 10% weekly VAR will be $2.78 million.
B. The same portfolio's 10% weekly VAR of $3 million.
C. The same portfolio's 10% weekly VAR will be $4.48 million.
D. The same portfolio's 10% weekly VAR will be $3.50 million.

Question 94.

If we are computing VaR by the variance covariance method, what is the linear exposure in case of positions in options?

A. Delta
B. Beta
C. Duration
D. Vega

Question 95.

In case of ....., we would usually want low confidence levels to get a proportion of excess loss observations

A. To set capital requirement.
B. For back testing purposes
C. For model validation
D. Option pricing

Question 96.

Forward-Looking stress and scenario tests must specify the following:

A. Length
B. Speed
C. Magnitude of events
D. All of the above

Question 97.

The following represents limitations of VaR:

A. VaR is informative of tail losses.
B. It encourages diversification.
C. it does not satisfy the property of Homogeneity.
D. None of the above.

Question 98.

Which of the following statement is correct?

A. If we are calculating VaR using the delta-normal method, we use assume that it follows a standard normal distribution in which mean($\mu = 1$) and Standard deviation ($\sigma = 1$).
B. If we are calculating VaR using the delta method, we use assume that it follow a standard normal distribution in which mean ($\mu = 0$). and standard deviation ($\sigma = 1$).

C. If we are calculating VaR using the delta-normal method, we use assume that it follows a standard normal distribution in which mean($\mu = 0$) and standard deviation ($\sigma = 0$)
D. If we are calculating VaR using the delta-normal method,...we use assume that it follow a standard normal distribution in which mean($\mu = 1$) and standard, deviation. ($\sigma = 0$).

Question 99.

As per Basel Accord for market risk, banks should operate with a holding period of

A. Fifteen days
B. Ten Days
C. Two weeks
D. Both B and C
E. None of the above

Question 100.

If we are computing VaR by the variance covariance method, what is the linear exposure in case of positions in stocks?

A. Delta
B. Beta
C. Duration
D. Rho

Question 101.

We might want a high confidence level if we were using our risk measures to set .....

A. To set capital requirement.
B. For back testing purposes
C. Liquidity requirement
D. Risk appetite

Question 102.

What is the equation for "Homogeneity"?

A. $\rho(X) \geq \rho(Y), X \leq Y$
B. $\rho(X) + \rho(Y) \leq \rho(X + Y)$
C. $\rho(tX) = t\rho(X)$
D. $\rho(X + n) = \rho(X) - n$

Question 103.

The most important property for a coherent risk measure

A. Risk-free condition
B. Monotonicity
C. Homogeneity
D. Subadditivity

Question 104.

A portfolio has 5% daily value at risk (VaR) of $100,000. Assuming that there are 250 independent trading days in a year, what will be 1% annual VaR estimate for the fund?

A. $2.30 million
B. $1.58 million
C. $1.26 million
D. $2.23 million

Question 105.

What is the equation for "Risk free condition"?

A. $\rho(X) \geq \rho(Y), X \leq Y$
B. $\rho(X) + \rho(Y) \leq \rho(X + Y)$
C. $\rho(tX) = t\rho(X)$
D. $\rho(X + n) = \rho(X) - n$

Question 106.

A risk measure (ρ) is said to be coherent if it satisfies the following properties:

A. Subadditivity
B. Homogeneity
C. Monotonicity
D. Risk-free condition
E. All of the above.

Question 107.

Each of the following statements about VaR is true except:

A. VAR is the method of measuring the loss in the value of a portfolio over a given time period and for distribution of historical returns.
B. Establishing a VAR involves several decisions, such as the probability and time period over which the VAR will be measured and the technique to be used.
C. VAR is the percentage profit in the asset or portfolio value that will be exceeded or can be equal to only X per cent of the time
D. VAR will be larger when it is measured over a month than when it is measured over a day.

Question 108.

The parameters on which VaR depends:

A. Confidence level and time period.
B. Expected shortfall
C. Stress Testing
D. All of the above

Question 109.

What is the equation for "Sub additivity"?

A. $\rho(X) \geq \rho(Y), X \leq Y$
B. $\rho(X) + \rho(Y) \geq \rho(X + Y)$
C. $\rho(tX) = t\rho(X)$
D. $\rho(X + n) = \rho(X) - n$

Question 110.

Why would a firm prefer advantages Expected Shortfall over VaR?

i. Expected shortfall is sensitive to the entire tail of the distribution, whereas VaR will not change even if there are large increases in some of the losses beyond the cut-off percentile at which the VaR is being measured.
ii. With expected shortfall, negative diversification effects can arise whereas VaR never displays negative diversification effects
iii. Expected Shortfall is more stable measure than VaR in showing less sensitivity to data errors and less day to day movement due to irrelevant changes in the input data.

A. All of the above are correct.
B. Only (i) and (ii) are correct.
C. None of the above is correct.
D. Only (i) and (iii) are correct.

Question 111.

Which of the following is a disadvantage of the Monte Carlo method?

A. We can generate correlated scenarios based on statistical distribution.
B. It is highly subjective.
C. It is expensive.
D. It cannot work both for linear and nonlinear risks.