FBQ1: _____ Situations may arise when the values of two variables deviate in the same direction
Answer: *Positive correlation*

FBQ2: _____ Correlation is said to be negative or inverse if the variables deviate in the opposite direction
Answer: *Negative*

FBQ3: _____ describes a situation where for a unit change in one variable there is a constant corresponding change in the other variable over the entire range of values.
Answer: *Linear Correlation*

FBQ4: _____ describes situations if corresponding to a unit change one variable; the other variable does not change at a constant rate but at a fluctuating rate
Answer: *Non-linear correlation*

FBQ5: _____ is the situation when the phenomena under study inter-influence each other. Such instances are usually observed in data relating to economic and business situations.
Answer: *Mutual dependence*

FBQ6: Karl Pearson was a British Biometrician and statistician suggested a mathematical method for measuring the magnitude of linear relationship between two _____
Answer: *Variables*

FBQ7: A British Psychologist _____ developed a formula in 1904 which can be used to obtain the correlation coefficient between the ranks of n individuals in the two variables or attributes being study
Answer: *Charles Edward Spearman*

FBQ8: Spearman's correlation coefficient measures correlation when the data is _____
Answer: *non-parametric*

FBQ9: _____ formula can be used even when dealing with variables which are measured quantitatively
Answer: *Spearman‘s rank correlation*

FBQ10: Spearman's correlation coefficient approximates Pearson's correlation when the sample size is _____
Answer: *Large*

FBQ11: _____, in general sense, means the estimation or prediction of the unknown value of one variable from the known value of the other variable
Answer: *Regression analysis*

FBQ12: Prediction or _____ is one of the major problems in almost all the spheres of human activity
Answer: *Estimation*

FBQ13: ___ is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data
Answer: *Regression analysis*

FBQ14: _____ is a type of regression in which more than two variables are studied
Answer: *Simple Regression*

FBQ15: _____ is the variable whose value is influenced or is to be predicted
Answer: *Dependent Variable*

FBQ16: _____ is the variable which influences the value of the dependent variable or which is used for prediction
Answer: *Independent Variable*

FBQ17: In regression analysis, the dependent variable is also known as _____
Answer: *Regressand*

FBQ18: _____ variable is also known as the regressor
Answer: *Independent*

FBQ19: ____ is the line which gives the best estimate of one variable for any given value of the other variable
Answer: *Line regression*

FBQ20: The term best fit is interpreted in accordance with the principle of least squares which involves minimising the sum of the squares of the residuals or the ____ of the estimates
Answer: *Errors*

FBQ21: A line of best fit can be roughly determined using an eyeball method by drawing a straight line on a scatter plot so that the number of points above the line and below the line is about_____
Answer: *Equal*

FBQ22: A more accurate way of finding the line of best fit is the _____ method
Answer: *least square*

FBQ23: _____ predict a single number in each forecast period
Answer: *point forecast*

FBQ24: R2 in regression analysis means _____
Answer: *Coefficient of multiple determination*

FBQ25: _____ states that given a sufficiently large sample size from a population with a finite level of variance, the mean of all samples from the same population will be approximately equal to the mean of the population
Answer: *Central limit theorem*

FBQ26: If a random sample of N cases is drawn from a population with a mean μ and standard deviation s, then the sampling distribution of the mean has a mean _____ to the population mean μx
Answer: *Equal*

FBQ27: Lyapunov Central Limit Theorem is named after Russian mathematician _____
Answer: *Aleksandr Lyapunov*

FBQ28: ___ Proofs that the used characteristic functions can be extended to cases where each individual X1, ..., Xn is an independent and identically distributed random vector in Rk
Answer: *Multidimensional Central Limit Theorem*

FBQ29: A useful generalization of a sequence of independent identically distributed random variables is a mixing random process in discrete time; "mixing" means, roughly, that random variables temporally far apart from one another are nearly _____
Answer: *Independent*

FBQ30: The _____ applies in particular to sums of independent and identically distributed discrete random variables
Answer: *central limit theorem*

FBQ31: The _____ gives only an asymptotic distribution

Answer: *central limit theorem*

FBQ32: The law of large numbers says that the sample mean of a random sample converges in probability to the mean μ of the individual random variables, if the _____ exists
Answer: *Variance*

FBQ33: In probability theory, the law of large numbers is a theorem that describes the result of performing the same experiment in a large number of ____
Answer: *Times*

FBQ34: The logarithm of a product is simply the sum of the logarithms of the _____
Answer: *Factors*

FBQ35: Index number may be classified in terms of the variables they _____
Answer: *Measure*

FBQ36: _____numbers study changes in price level of commodities over a period of time
Answer: *price index*

FBQ37: _____ depict changes in the general price level of the economy
Answer: *Wholesale price index number*

FBQ38: _____ number reflect changes in the retail prices of different commodities
Answer: *Retail Price Index*

FBQ39: ____ number reflect changes in the volume of goods produced or consumed
Answer: *Quantity Index*

FBQ40: _____ number study changes in the total value (price X quantity) e.g index number of profit or sales
Answer: *Value Index*

FBQ41: ____ is the aggregate of prices of all the selected commodities in the current year as a percentage of the aggregate of prices in the base year.
Answer: *Simple (unweight) Aggregate Method*

FBQ42: In _____ appropriate weights are assigned to various commodities to reflect their relative importance in the group
Answer: *Weighted Aggregate Method*

FBQ43: Laspeyre's Price Index or Base year method means taking the base year quantity as _____
Answer: *Weights*

FBQ44: Paasche's Price Index, the current year quantities are taken as _____
Answer: *Weights*

FBQ45: ___ Index is given by the arithmetic mean of Laspeyre's and Paasche's price index numbers
Answer: *Dorbish-Bowley Price*

FBQ46: _____ advocated the geometric cross of Laspeyre's and Paasche's Price index numbers
Answer: *Irving Fisher*

FBQ47: _____ is termed as an ideal index since it satisfies time reversal and factor reversal test for the consistency of index numbers
Answer: *Fisher's Index*

FBQ48: _____ is a branch of mathematics that deals with the

collection, organization, and analysis of numerical data and with such problems as experiment design and decision making
Answer: *Statistics*

FBQ49: _____ are data collected directly from the field of enquiries by the user(s) or researcher(s) themselves
Answer: *Primary data*

FBQ50: _____ are data which have been collected by someone else or some organization either in published or unpublished forms
Answer: *Secondary Data*

Multiple Choice Questions (MCQs):
MCQ1: A Bernoulli process is a finite or infinite sequence of _____ random variable
Answer: Binary

MCQ2: Bernoulli process can also be generalized to more than _____ outcomes
Answer: One

MCQ3: The negative Binomial variables may be interpreted as random waiting _____
Answer: Moment

MCQ4: The _____ process can be formalized in the language of probability spaces as a random sequence of independent realisations of a random variable that can take values of heads or tails
Answer: Statistical

MCQ5: The Bernoulli distribution was named after Swiss scientist _____
Answer: Adam Smith

MCQ6: A classical example of a Bernoulli experiment is a single toss of a _____
Answer: Card

MCQ7: The maximum likelihood estimator based on a random sample is the _____
Answer: sample mean

MCQ8: The normal distribution was first discovered by English Mathematician De-voire in _____
Answer: 1729

MCQ9: The graph of normal distribution is called _____
Answer: Normal curve

MCQ10: Using normal tables, find the values of probabilities P(z < 0.50)
Answer: 0.6915

MCQ11: Using normal tables, find the values of probabilities P(z < -2.50)
Answer: 0.0081

MCQ12: Using normal tables, find the values of probabilities P(-1.50 < z < 2.50)
Answer: 0.8211

MCQ13: Using normal tables, find the values of probabilities P(1.62 < z < 2.20)
Answer: 0.0871

MCQ14: Poisson distribution was derived in _____
Answer: 1837

MCQ15: Poisson distribution was derived by a French mathematician _____

Answer: Simeon D. Poisson

MCQ16: The condition under which Poisson distribution is obtained is in a limiting case of _____
Answer: Binomial Distribution

MCQ17: A statistical _____ is a method of making decisions using data from a scientific study
Answer: Data

MCQ18: In statistics, a result is interpreted as being statistically significant if it has been predicted as unlikely to have occurred by ____ alone according to a pre-determined threshold probability, the significance level.
Answer: Chance

MCQ19: The phrase "test of significance" was coined by statistician _____
Answer: Dein Fisher

MCQ20: The critical region of a hypothesis test is the set of all outcomes which cause the null hypothesis to be rejected in favour of the _____ hypothesis
Answer: Second

MCQ21: Statistical hypothesis testing is sometimes called _____
Answer: True testing

MCQ22: _____ testing is a key technique of frequentist inference.
Answer: Z

MCQ23: Statistics are helpful in analysing most collections of _____
Answer: Test

MCQ24: Common test Statistics are; t-test, z-test, chi-square test and f-test which is sometimes referred to as analysis of _____
Answer: variance (ANOVA) test

MCQ25: If the population variance is unknown then for the large samples, its estimates provided by sample variance S2 is used and _____ is applied
Answer: Figures

MCQ26: F-distribution has a number of applications in the field of _____
Answer: Statistics

MCQ27: _____ test is use to test for equality of population variances
Answer: T

MCQ28: The square of a standard normal variable is called a _____ variate with 1 degree of freedom
Answer: F test

MCQ29: chi-square test of _____ is used to determine how well theoretical distributions such as the normal and binomial distributions
Answer: Sample

MCQ30: Chi square for _____ consider a given population consisting of N items divided into r mutually disjoint (exclusive) and exhaustive classes
Answer: independence of attributes

MCQ31: For the contingency table data, the _____ hypothesis is always set up that the attributes under consideration are independent
Answer: Alternative

MCQ32: The term Analysis of Variance was introduced by _____
Answer: Dr Ganiyat Uthman

MCQ33: The term Analysis of Variance was developed in _____
Answer: 1922

MCQ34: The total variation in any set of numerical data is due to a number of causes which may be classified as assignable causes and _____
Answer: Variable causes

MCQ35: _____ test is based on the test statistic F or variance ratio
Answer: Z test

MCQ36: _____ as a tool has different dimensions and complexities
Answer: ANOVA

MCQ37: _____ technique enables us to compare several population means simultaneously and thus results in lot of saving in terms of time and money
Answer: T

MCQ38: The origin of the _____ technique lies in agricultural experiments and as such its language is loaded with such terms as treatments, blocks, plots
Answer: Regression

MCQ39: _____ is not designed to test equality of several population variances.
Answer: T test

MCQ40: In statistics, the term non-parametric statistics refers to statistics that do not assume the data or _____ have any characteristic structure or parameters
Answer: Calculation

MCQ41: non-parametric statistics are suitable for examining the order in which runners complete a race, while _____ statistics would be more appropriate for looking at the actual race times
Answer: Distribution

MCQ42: ____ methods are widely used for studying populations that take on a ranked order
Answer: Non-parametric

MCQ43: _____ models differ from parametric models in that the model structure is not specified a priori but is instead determined from data
Answer: Regression

MCQ44: _____ is a non-parametric test alternative to the one-way analysis of variance
Answer: T test

MCQ45: _____ provides an estimate of the relationship between two measurements, without any assumption of whether one comes before the other
Answer: T test

MCQ46: Correlation coefficients have a value between -1 and _____
Answer: +2

MCQ47: A positive _____ means that x and y values increases and decrease in the same direction
Answer: F test

MCQ48: A negative _____ means that as x and y move in opposite directions, one increases as the other decreases
Answer: Correlation

MCQ49: Coefficient of 0 means x and y are associated _____
Answer: Positively

MCQ50: The _____ measures only the degree of linear association between two variables
Answer: Regression model