

TELANGANA UNIVERSITY
S.S.R. DEGREE COLLEGE, NIZAMABAD (C.C:5029)
IV SEMESTER INTERNAL ASSESSMENT II EXAMINATIONS
BUSINESS STATISTICS-II QUESTION BANK

I. Multiple choice questions.

1. The first step in time-series analysis is to [c]
 - a) Perform preliminary regression calculations
 - b) Calculate a moving average
 - c) Plot the data on a graph
 - d) Identify relevant correlated variables
2. Time-series analysis is based on the assumption that [a]
 - a) Random error terms are normally distributed
 - b) There are dependable correlations between the variable to be forecast and other independent variables
 - c) Past patterns in the variable to be forecast will continue unchanged into the future
 - d) The data do not exhibit a trend
3. The cyclical component of time-series data is usually estimated using [d]
 - a) Linear regression analysis
 - b) Moving averages
 - c) Exponential smoothing
 - d) Qualitative methods
4. In time-series analysis, which source of variation can be estimated by the ratio-to-trend method? [c]
 - a) Cyclical
 - b) Trend
 - c) Seasonal
 - d) Irregular
5. If regression analysis is used to estimate the linear relationship between the natural logarithm of the variable to be forecast and time, then the slope estimate is equal to [c]
 - a) The linear trend
 - b) The natural logarithm of the rate of growth
 - c) The natural logarithm of one plus the rate of growth
 - d) The natural logarithm of the square root of the rate of growth
6. The use of a smoothing technique is appropriate when [a]
 - a) Random behavior is the primary source of variation
 - b) Seasonality is present
 - c) Data exhibit a strong trend
 - d) All of the above are correct
7. The greatest smoothing effect is obtained by using [b]
 - a. A moving average based on a small number of periods
 - b. Exponential smoothing with a small weight value
 - c. The root-mean-square error
 - d. The barometric method
8. The root-mean-square error is a measure of [d]
 - a. Sample size
 - b. Moving average periods
 - c. Exponential smoothing
 - d. Forecast accuracy
9. Barometric methods are used to forecast [c]
 - a. Seasonal variation
 - b. Secular trend
 - c. Cyclical variation
 - d. Irregular variation

10. If 3 of the leading indicators move up, 2 move down, and the remaining 6 are constant, then the diffusion index is [b]
 a. $3/6 = 50\%$ b. $3/11 = 27\%$ c. $5/11 = 45\%$ d. $6/11 = 55\%$
11. Way of getting information from measuring observation whose outcomes occurrence is on chance is called [b]
 (a) Beta experiment (b) Random experiment
 (c) Alpha experiment (d) Gamma experiment
12. Probability of second event in situation if first event has been occurred is classified as [b]
 (a) Series probability (b) Conditional probability
 (c) Joint probability (d) Dependent probability
13. Probability which is based on self-beliefs of persons involved in experiment is classified as [a]
 (a) Subjective approach (b) Objective approach
 (c) Intuitive approach (d) Sample approach
14. In probability theories, events which can never occur together are classified as [c]
 (a) Collectively exclusive events (b) Mutually exhaustive events
 (c) Mutually exclusive events (d) Collectively exhaustive events
15. Number of individuals arriving at boarding counter on an airport is an example of [a]
 (a) Numerical outcome (b) Non numerical outcome
 (c) Random outcome (d) Simple outcome
16. If two events X and Y are considered as partially overlapping events then rule of addition can be written as [d]
 (a) $P(X \text{ or } Y) = P(X) - P(Y) + P(X \text{ and } Y)$ (b) $P(X \text{ or } Y) = P(X) + P(Y) * P(X-Y)$
 (c) $P(X \text{ or } Y) = P(X) * P(Y) + P(X-Y)$ (d) $P(X \text{ or } Y) = P(X)+P(Y)-P(X \text{ and } Y)$
17. According to combination rule, if total number of outcomes are Y and distinct outcome collection is 'n' then combinations are calculated as [a]
 (a) $n!D r! (n-r)!$ (b) $n!D r!(n+r)!$ (c) $r!D n!(n-r)!$ (d) $r!D n!(n+r)!$
18. For a random experiment, all possible outcomes are called [d]
 (a) Numerical space (b) Event space (c) Sample space (d) Both b and c
19. Types of probabilities for independent events must includes [d]
 (a) Joint events (b) Marginal events (c) Conditional events (d) All of above
20. Probability without any conditions of occurrence of an event is considered as [b]
 (a) Conditional probability (b) Marginal probability
 (c) Non conditional probability (d) Occurrence probability

II. Fill in the blanks.

1. A single-equation econometric model of the demand for a product is a structural equation in which the quantity demanded of the product is an endogenous
2. Trend projection is an example of time-series
3. Turning points in the level of economic activity can be forecast by using barometric methods
4. The graph of time series is called histogram
5. Secular trend can be classified in to four methods
6. In time series seasonal variations can occur within a period of one year

7. Time-series analysis is based on the assumption that past patterns in the variable to be forecast will continue unchanged into the future
8. A single-equation econometric model of the demand for a product is a structural equation in which the quantity demanded of the product is an endogenous variable.
9. Barometric methods are used to forecast cyclical variation
10. A Time series is a statistical data that are collected, observed or recorded at regular intervals of time.
11. Marginal probability of independent events and dependent events must be same
12. Method of counting outcomes in which number of outcomes are determined while considering ordering is classified as permutation
13. In probability theory, events are denoted by capital letters
14. Difference between sample space and subset of sample space is considered as complementary events
15. Occurrence of two events in a way that events have some connection in between is classified as compound events
16. Method in which previously calculated probabilities are revised with new probabilities is classified as Bayes theorem
17. Probability of events must lie in limits of zero to one
18. Measure of chance of an uncertain event in form of numerical figures is classified as probability
19. Events in which some points of sample are common are considered as overlapping events
20. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green is $\frac{1}{3}$

Short Answer Questions.

1. Semi-Average method?
2. What do you mean by Deseasonalisation of data?
3. Dependent event?
4. Mutually exclusive events?
5. What is probability?
6. Random experiment?
7. Permutation of combination?
8. What is Binomial Distribution?
9. Importance of poisson distribution?
10. Uses of normal Distribution?