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

I. Multiple choice questions.

1. The weighted arithmetic mean is always _____ than the simple arithmetic mean   [d]
a. Greater   b. Lower   c. Equal to   d. cannot be said with certainty

2. For the purpose of selecting a candidate for a job, candidates are evaluated on various parameters.
Which average should be chosen to decide on the right candidate?   [c]
a. Simple arithmetic mean   b. weighted arithmetic mean
c. Combined mean   d. Geometric mean

3. Which of the following statements is not true about the median?   [b]
a. It is a positional average   b. It is affected by extreme values
c. All observations need to be arranged in ascending or descending order before calculating the median
d. All of the above statements are true

4. The positional measure that divides the entire series into 10 equal parts is called   [c]
a. Median   b. Quartile   c. Decile   d. Percentile

5. Dispersion measures   [a]
a. The scattering of a given set of observations
b. The concentration of a given set of observations
c. Both a and b
d. Neither a nor b

6. When 2 or more distributions are to be compared, then we must consider   [b]
a. Absolute measures of dispersion   b. Relative measures of dispersion
c. Both a and b   d. None of the above

7. Which of the following measure is expressed as a pure number (without any units) which enables
comparison of the levels of dispersion from a central tendency across different series?   [c]
a. Inter quartile range   b. Standard deviation
c. Coefficient of variance   d. All of the above

8. The following are the wages of 10 workers of a factory.
Find the range of variation:120, 170, 240, 100, 105, 205, 300, 160, 150, 180   [b]
a. 100   b. 200   c. 300   d. 0.5

9. Calculate co-efficient of range   [c]

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	5	8	12	20	15	7	3

a. 0   b. 70   c. 1   d.2

10. Mean deviation of a series is the arithmetic average of the deviations of various items from   [c]
a. Mean   b. Median   c. either Mean or Median   d. None of the above

11. Given Q = 24, Q = 36, Co-efficient of Quartilie deviation =   [b]
a. 18   b. 0.429   c. 30   d. 60

12. In a normal distribution   [a]
a. Mean = median = Mode   b. Mean < median > mode
c. Mean > median > mode   d. Any of the above relations is possible

13. High correlation between rainfall and stock prices means   [c]
a. If rainfall increases, stock prices will definitely increase
b. If rainfall increases, stock prices will definitely decrease
c. If rainfall increases, stock prices may or may not increase
d. There is no relation between rainfall and stock prices

14. Which of the following statements is true?   [c]
a. Causation and correlation are two words meaning the same thing
b. Correlation implies that the change in a variable is because of the change in another variable
c. Causation is the relationship between an event and a second event, where the second event is understood as a consequence of the first
d. None of the above

15. Which of the following can be a reason for high correlation between 2 variables, without having a cause and effect relationship?   [d]
a. Common factor influencing both variables   b. Mutual dependence
c. Pure chance   d. All of the above

16. Which of the following statements is true?   [a]
a. Two variables having causation will have a high correlation
b. Two variables having causation will not have a high correlation
c. Two factors having a high correlation will have causation
d. There is no difference between causation and correlation

17. When price increases, demand decreases. This is an example of   [b]
a. Positive correlation   b. Negative correlation   c. No correlation   d. linear correlation

18. Which of the following is not an example of Logical correlation?   [c]
a. Correlation between price of oil and price of gold
b. Correlation between agricultural output and price of gold
c. Correlation between gold medals won by India at the Olympics and price of gold
d. All of the above are examples of logical correlation

19. Which of the following statements is rue in respect of a scatter diagram?   [d]
a. If the points plotted on the diagram are closer to each other, there is a correlation
b. If points are scattered there is no correlation or lesser correlation
c. Shape of the scatter diagram reveals whether correlation is positive or negative, linear or non-linear
d. All of the above

20. Which of the following methods of measuring correlation is impacted by extreme values?   [b]
a. Scatter diagram method   b. Karl Pearson's method
c. Spearman's Rank correlation method   d. Concurrent deviation method

II. Fill in the blanks
1. The <u>weighted arithmetic mean</u> clearly brings out the relative importance of the various components of a series
2. Weighted mean should be calculated when the importance of the items in a series is <u>not equal</u>
3. The sum of squares of deviations of a set of observations is the minimum when deviations are taken from the arithmetic average. This is known as <u>the property of 'least squares'</u> in arithmetic mean.
4. If each of the values of a variate X is increased by a constant k, the impact on arithmetic mean is that it <u>increased by the same amount</u>
5. <u>Dispersion</u> measures the extent to which the items vary from some central value
6. It can be inferred that an average is truly representative of the series if the measure of dispersion is <u>small or low</u>
7. <u>Absolute</u> measure of dispersion is one that is expressed in terms of the same unit in which the variable (or given data) is measured
8. <u>Range</u> is the difference between the values of the largest item and the value of the smallest items of a series

9. The formula for calculating coefficient of Range is $\dfrac{L-S}{L+S}$

10. Quartile Deviation shows the average amount by which the two quartiles differ from <u>median</u>

11. The formula for calculating coefficient of quartile deviation is $\dfrac{Q_3 - Q_1}{Q_3 + Q_1}$

12. <u>Standard</u> is the square root of the arithmetic average of the squares of the deviations measured from mean

13. <u>Correlation</u> is a quantitative measure of the degree or strength of relationship that may exist between two variables

14. There is a <u>high, positive</u> correlation between rainfall and stock prices

15. Positive correlation means that the direction of change is likely to be <u>same</u>

16. <u>Causation</u> implies that the change in a variable is because of the change in another variable

17. Correlation between two variables is <u>Linear</u> if the change in one variable in response to change in another variable is proportionate

18. Correlation between variables in social sciences is always <u>Non-linear</u>

19. When the correlation between two variables is not just a calculation but has a logical base or reasoning, such correlation is called <u>logical correlation</u>

20. The <u>shape</u> of the scatter diagram reveals whether correlation is positive or negative, linear or non-linears